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CANOEING FOR SUMMER CAMPS AND RECREATIONAL PROGRAMS

Submitted by

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(B.S., Boston University,1939)

In partial fulfillment of requirements for

the degree of Master of Education

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Many competitors in canoe racing, here and abroad, were a source of inspiration and motivation. They cannot be mentioned individually, therefore collective acknowledgement is extended.

Acknowledgement is also extended to many persons associated with small craft educational programs, upon whose urging I have undertaken this writing.

Special mention is given to George Petito and Emil Schmidt, my coaches in canoe racing; to Ted Blackman, greatest single blade paddler of his time, with whom I trained during all my years of competition; to W. Van Brunt Claussen, Manager of the 1936 Olympic Canoe Racing Team, and the nation's recognized authority on Small Craft Safety; to Carroll L. Bryant, the National Director of American Red Cross Water Safety Service.

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INTRODUCTION

A desire on the part of many people has been expressed for a book on canoeing which includes detailed information on techniques, activities, and program. It is thought by these people that the quality of canoeing skills, and the effectiveness of canoeing programs would be greatly enhanced if such material were available.

It is believed that canoeing is not at present generally engaged in with the same degree of skill as when the white man first learned from the Indian how to use the canoe. Consequently, present day canoeists fail to develop a deep appreciation of canoeing, and to receive optimal benefits from their time spent in the activity. They are, in fact, generally unsafe using canoes. The lost art of canoe handling therefore, needs greater efforts at revival.

It is true that the canoe is no longer an essential means of transportation, but canoeing as a recreational and physical activity is popular, and if properly directed, does embody many possibilities of fulfilling objectives of physical education. Information on techniques, program and method therefore, are important.

Among the many books that have been written on canoeing there are some that should be in a canoeist's library because of their fine quality that is of distinctly practical value.

Claussen[1] has made a profound impression upon the quality of canoeing done in America in the present generation. His books and his personal appearances in lecture demonstrations all over the United States represent the broadest and the most authoritative contribution to good canoeing ever made by a single individual.

Pulling[2] has made a fine general contribution. His presentation is based on years of experience in the wilderness country of the north and in organized camps.

Pinkerton[3] has written a book of particular value for its fine coverage of things to be known by those who do wilderness canoe trips, or any type of canoeing involving varying types of water, camping, and portages.

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1 Claussen, Waldemar Van Brunt; "Canoeing", Boy Scouts of America, Two Park Avenue, New York City, 1931. (136 pages, including Appendix on Repair, by Fred C. Mills. "Canoeing," (Merit Badge series) Boy Scouts of America, Two Park Avenue, New York, 1939. (56 pages, plus an introduction on History by Dr. J. B. May(.

2 Pulling, Albert Van Siclen; "The Elements of Canoeing", the Duke Publishing Co., Ann Arbor, Michigan, 1933. 139 pages.

3 Pinkerton, Robert E. "The Canoe"; Its Selection, Care and Use, The MacMillan Company, 1942. 162 pages.

Among organizations, the Boy Scouts of America in its aquatic schools and camps, and the American Red Cross in its aquatic schools and water safety programs, have made very notable contributions to safety in canoeing, and to a considerable extent to the improvement of skills of the general type.

The American Canoe Association, organized in 1880, though not an educational organization, has indirectly advanced safety and the promotion of skilled canoeing. It has, as a prerequisite to membership, a rule that swimming skill must be possessed. Furthermore, its members, or a substantial number of them, become skilled canoeists through association with skilled canoeists and much devotion to the activity. They often contribute their skill and knowledge to others by serving as staff members of Boy Scout, and Red Cross Aquatic Schools, and at organized camps. They also have an indirect influence on beginners by setting good examples in the art of canoe handling. Some of these men, occasionally stage canoe demonstrations for interested groups. Regattas conducted by the American Canoe Association, or its affiliated Canoe Clubs, include races and novelty events. Members of the audiences learn from observation of these.[1]

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[1] Note: The American Canoe Association issues to its members annually, a Year Book. These are available in some libraries. The organization also publishes an official magazine, The American Canoeist, Room 934, 230 Park Avenue, New York City.

This book is essentially intended to be of most value to persons undertaking to develop a good canoeing program in summer camps. Aspects dealing with history, romance, campcraft, and nature study possibilities will be largely sacrificed in order to give space to things more specifically canoeing.

The chapters, for the most part, are arranged progressively, from the simple but basic, to the more complex and advanced. Reader appeal may be somewhat lessened as a result, but this must be risked. To clarify, consider Chapter Two. To place this chapter at the end of the book might mean that it would not be given the study it deserves, and as a result, the whole program of canoeing would suffer through misuse of equipment. To a large extent, the chapters are built one upon the other. An experienced canoeist may easily brush over the early chapters if he desires, but a proper sequence is necessary for the need it is hoped this book will fulfill.

CHAPTER ONE

LORE

CHAPTER ONE

LORE

The historical aspect of canoeing will be discussed only sufficiently to promote an appreciation of the craft and the meaning it has held for people from primitive times to the present.

Like relating the history of man himself, the story of canoeing takes us into the dim past, to the dawn of primitive man. Man's struggle with his environment at that time was intimate and basic. His perceptions lacked keenness. Doubtless, he had not as yet developed a language. His problem of survival was likely a day to day affair of fighting to live, guarding against ferocious animals, procuring food, hunting and escaping. It is reasonable to assume that he could not swim, for man is a terrestrial creature, and swims not naturally, as other animals, but as a result of a specific learning process. A floating log may, therefore, have been the first means available to him for crossing a body of water he could not ford or circumvent.

Later, he may have found that when members of his family on other logs came close to his, greater stability resulted when they all held the logs together upon crossing the stream. It was an easy step from here to lashing the logs together with vines, to make a raft. Smaller sticks and limbs may have then been lashed across these to produce a deck on which could be

placed man's few possessions in transit. Whereas the single log was probably paddled by hand, the raft was soon propelled by pole or crude wooden paddle. About this time, or some time later, depending upon how this progression paralleled man's development of crude tools, and discovery of fire making, the hollow log must have been brought into use. Hollowing out a log may have been an original idea of man or was suggested to him by nature. Fire, caused by lightning, could very well have burned out a hollow in a log without destroying the log completely. Man may have accidentally discovered such a log and found that he could sit in this hollow and cross a river. This was the real step forward in the development of the canoe. After the hollow, came the shaping of the ends to lessen resistance.

This hollow log developed with the evolution of man in various parts of the earth; took on different sizes and shapes or designs, according to the use to which it was put, the skill, the esthetic nature of the individual, his religion, folk lore, or other influences.

In the Pacific Islands, outriggers were added to contribute stability. On our own west coasts, giant fir trees were hollowed out to make canoes large enough for the sea. In later times the construction of primitive canoes took on more complex modifications.

The kayak, used by the eskimos, was made of animal skin

stretched over a frame of wood or whalebone.

The birch bark canoe, which is the primitive craft of special interest to us, was developed by the Indians of the northeastern part of the North American continent. Its structure was similar to that of our present canvas covered canoe, since the latter is a direct descendant of the birch bark and a refinement of it. A framework of gunwales and ribs was constructed, sometimes planking was laid on the ribs; and in all cases, the whole was covered with birch bark sewed on with wool fibers and waterproofed with pitch. Though rare now, the birch bark is still in existence.

When the white man first came to this new world, he was confronted with wildness such as he had never before known. Impenetrable forests kept him for a time settled close to the eastern shores. He was destined to build a great empire, one that would play a mighty part in the affairs of mankind. To do this he had to produce bold pioneers. A civilization had to be carved out of a virgin wilderness three thousand miles deep. Lakes, rivers, streams offered the only avenues by which much of it could be penetrated. Thus it was that the canoe became an important implement in the exploration of America. It helped to lay the groundwork for the development of a nation. Historical literature makes many references to it. Even today it is often essential to the people who live in the far North.

With such a background, it is only natural that to many Americans the canoe represents romance, adventure into an in-

viting unknown, a touch of the past, something intimate and fundamentally unchanged out of history. The canoe is primarily a wilderness craft, light, delicately constructed, gracefully designed, intended mostly for waters inaccessible to other craft, convenient for portaging between waters, a link between civilization and undeveloped country.

Today, however, it has new uses. Recreation has brought the canoe into thickly populated regions, and has sent urban people out to the canoe in the wilds. It is nearly always the city person, using the canoe occasionally for recreation, and lacking skill, who gets into trouble and loses his life.

There are notable exceptions to this, for example, the canoe racing men of the American Canoe Association, belonging to canoe clubs in various parts of the country. These men have made a science of paddling, for canoe racing is one of the oldest organized sports in America.

CHAPTER TWO

ON SHORE

CHAPTER TWO

ON SHORE

It has been observed that the average canoe is in use actually, only about two per cent of its life. Obviously, consideration of its care and storage while not in use is, therefore, important, if its usefulness is to be preserved and prolonged.

It is common knowledge among most canoe owners that a greater amount of damage is done to canoes by improper storage facilities, hot sun, damp earth, careless transportation and general indifference to the canoe while it is not in use, than is done while the canoe is on the water. This statement pertains to the conventional canoe in use throughout most of America. The new metal canoes now on the market and other innovations are, so far, believed to stand up better under hard use. These are so new, however, that they are not being considered for discussion here, inasmuch as this material is being written as an answer to questions arising through the use of conventional models prevalent for so many generations in this country.

STORAGE:

Ideally, the canoe should be stored in a canoe house, where it has protection from the elements. This involves an

economic factor which cannot always be accepted. In this case during off seasons, the canoe should be kept inside any dry building, for example, the dining hall at camp.

During the canoeing season, a canoe left out of doors should be kept out of the direct rays of the sun; either under shade trees, or a specially constructed shelter provided with a roof. Whether indoors or out of doors, it should be placed, bottom side up, on a properly constructed rack. This will give it support by its gunwales on horizontals which are plumb and square; and a distance apart equal to one half the over-all length of the canoes to be racked. This gives support to the canoe with a desirable distribution of weight throughout the structure of the craft.

If allowed to remain under the beating rays of the sun, the paint and varnish on the canvas bottom will be blistered or cracked, causing leaks which, in addition to their annoyance, gradually brings about rotting of the canvas and eventually, of the planking. Many aquatic directors at camps unwittingly bring about damage to canoes in the following manner.

As part of their canoeing course, the canoes are frequently capsized for instructional purposes. At the end of the class period they are then turned bottom side up, either on the ground or on racks, but in each case under the direct rays of the sun. This draws the water from the inside of the canoe out through the canvas, blistering the paint and varnish. The blame is usually placed upon the quality of the paint, varnish or the

enamel with which the canvas has been finished.

When not properly racked as indicated above, the structure of the canoe will gradually become warped, and a misshapened craft will result. Often canoes are placed on properly constructed racks, but with the top side up instead of the bottom side up, so that the keel supports most of the weight. This results in a bowed keel at both points of contact.

A good plan to follow for adequate and careful accommodation of canoes in season comprises the following features. A site should be selected near the water's edge, but not too near. Room must be allowed for easy handling of the craft off and on the racks, and consideration given to the rise and fall of the water. Placing the racks too far away would involve an unnecessary long carry. Good judgement in making use of the particular features of the terrain adjacent to the water is better than any precise rule. If the chosen area has good shade trees, so much the better. Desirable racks should be constructed on the chosen site. If economy of space is not a necessary consideration, a satisfactory rack may be constructed by erecting two horizontal bars of two inch by four inch wood, about eighteen inches above the ground and eight feet apart (or one-half the length of the canoes to be racked). These horizontals can be bolted or nailed at each end to short posts driven into the ground. If made long enough to support three or more canoes abreast, the horizontals may have to be supported at the middle by a third post.

This will depend upon the strength of the wood. If economy of space must be considered, an outdoor storage rack embodying the features of racks seen in canoe houses can be constructed by erecting three pairs of horizontals the usual eight feet apart. One pair should be about a foot above the ground. The second pair should be directly above the first, a distance of about two feet, and the third pair similarly about two feet above the second.

These horizontals must be bolted or nailed to upright posts driven firmly into the ground. If these uprights are extended to a height of about eight feet, a roof or frame for a canvas roof may be incorporated into the structure of the rack to protect the canoes from the sun, if no shade trees are present.[1]

It should not be overlooked that lashings desirably should be provided for the above racks, so that the canoes may be secured to the racks as a precaution against wind or storm. Sash cord or small cotton line are recommended.

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[1] Detailed drawings and further suggestions for construction of canoe racks can be procured by writing to Area or National Offices of the American Red Cross, requesting a copy of the drawing by W. Van B. Claussen entitled "Types of Outdoor Canoe Storage Racks".

A rack of the low type first mentioned above can be constructed just wide enough for one canoe and is recommended to the owner of a single canoe. Two wooden horses are satisfactory when placed on level ground, but there is danger of upset when there is a high wind. Lines tied to the thwarts can be staked down, like staking down a tent, as a measure of precaution against this.

Lacking the facilities indicated above, leaving the canoe on the ground may be the only alternative, and certainly on canoe trips racks will not be available unless they are improvised out of fallen logs. As a temporary measure, leaving the canoe on the ground is satisfactory provided the canoe is bottom side up, in the shade and has a board, a chip of wood, a piece of bark, or similar dry material placed under each end and under the gunwale where each of these three points come in contact with the ground. If this measure is not taken, the dampness of the ground eventually will break down the finish, and cause rot to set in at these three places.

The above is a minimum of information on desirable racking methods. Modifications, or other methods, necessary because of peculiar situations should incorporate the pertinent factors indicated above if the canoe is to have a long life.

EMERGENCY REPAIRS

Since canoe construction and repair are covered in other books on the subject[1], it is not intended to dwell upon them here. There are, nevertheless, things that must be touched upon lightly in the interest of preservation of the canoe.

The most common and unwise practice found is that of overpainting the canoe. Over a period of years the original weight is greatly increased and invariably cracking of the paint occurs, which promotes leaking.

It is better to sand the bottom each year and apply one coat of varnish. Painting may not be necessary for several years. If the paint is rubbed off in several places, those spots may be touched up before varnishing. If the canoe is already heavily painted and cracking, the paint may be removed with a paint remover according to the instructions for its use, being careful not to remove the filler from the canvas. It is wise to use a paint remover whose activity is self dissipating after its initial effect has been achieved. Most paint removers will have to be neutralized with alcohol, turpentine or gasoline. The instructions are usually given on the container. The danger here lies in the fact that the paint remover may act upon the new paint and spoil the job. After the old paint is removed, the surface should be sanded and two or three thin coats of paint applied. Sanding is necessary between coats. The job

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[1] "Boat Building and Canoe Repair", No. 3145, 40¢ B.S.A. Two Park Avenue, New York.

should be finished with one or two coats of thin varnish.

The inside should not be neglected. Only varnish should be used there, and only when needed. If the inside is kept clean, if the canoeist wears mocassins or some soft foot gear, if general carefulness is employed to prevent scratching and wear, the inside will hold up well. When re-varnishing is necessary, use the same care in preparation and application as you would in re-varnishing an item of furniture in your home, but avoid the use of steel wool, for its particles may lodge between planking and ribs, and later rust.

The repairs necessary for a canoeist properly trained and careful in this use of his craft are nearly always minor, involving only small tears in the canvas. In such cases, the canvas and planking beneath the canvas should be allowed to dry. Both should be cleaned at the damaged place. From a piece of cotton or linen of the approximate weight of a handkerchief, a patch should be cut slightly longer than the rip in the canvas. Its width should be more or less than an inch, depending upon the size of the tear in the canvas, and the ease of inserting the patch under the lips of the tear.

A good waterproof, quick-drying liquid cement, such as AMBROID, is spread with a knife blade on the planking under the torn area. Quickly and carefully the patch is inserted under the tear at its lips and ends. The cement will quickly permeate the cloth, which is desirable. Better results may be achieved if there is time available to wait until this

initial application of the cement has dried. This, however, is not necessary. More cement is then spread on top of the patch and the lips of the tear pressed down firmly onto the patch and held there for a few minutes until drying sets in. Later, a hollow place in the cement between the lips of the tear will be noticed. This can be filled with more cement, and when dry, the canoe is ready for use. Except for a scar, a smooth surface results with no bulge; as occurs when heavy canvas is used for patching.

If the tear is very near the keel of the canoe, it will be necessary to apply the patch externally because of the difficulty of inserting it under the canvas. In this case the same light weight material is used for the patch. The area around the tear should be sanded and wiped clean. This external patch must be thoroughly saturated with cement.

CHAPTER THREE

CARRYING AND LAUNCHING

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CARRYING AND LAUNCHING

Damage to the canoe, and injury to the canoeist frequently results from crude, unskilled methods of carrying and launching. The learning involved to eliminate these hazards is simple, but not so simple as to justify omitting a discussion of desirable methods.

CARRYING

The novice is apt to regard the canoe as an awkward thing to carry. Actually, it is easy to carry if proper methods are employed and the proper sized canoes used. Ordinarily, canoes used at camps and other recreational areas are too large for any but grown men to carry with safety and ease.

For general application, it may be considered that canoes less than fifteen feet, or over eighteen feet are not practical. In parts of the northern United States and Canada, twenty foot canoes with considerable depth are very popular for extended trips in rough water and with considerable luggage or cargo; but for the ordinary canoeist, and certainly for children in summer camps, these are a bit too large. For use in summer camps which do not go in for extended canoe trips, canoes should be fifteen feet long and not over sixteen. The average camper is still quite immature and should not be required to

struggle with a larger canoe. Actually, the fifteen footer is a good, all round model, and is less expensive to purchase than the larger ones. It can be carried easily by two youngsters, for its weight is rarely over fifty pounds. An adult can carry it easily alone.

On the water, its size makes it excellent for paddling by one or two boys, or by one man.

The conditions under which a canoe is to be used, of course, affect the utility of the various sizes. If extended canoe trips are planned, the fifteen footer is useful for one adult with luggage, or two boys with luggage. The same can be said for the sixteen footer, although two adults with light luggage will get along satisfactorily.

The seventeen and eighteen footers are most desirable for long trips because they allow room for adequate luggage and supplies without increasing the draft too greatly. Types that are constructed with regard to lightness are to be preferred.

TWO-MAN CARRIES

Although selection of a canoe of proper size is an important factor, methods of carrying are probably of more importance, for, as in any activity, skill greatly increases the safety and pleasure involved. In considering methods of carrying, it should be stated at the outset that canoes should be carried, not dragged, pushed or in any way carelessly moved from land to water.

Ordinarily, it is preferable to have two persons carry the

canoe, one at each end, or for very short carries, both amidships, opposite each other. When lifting a canoe from a rack, care must be given to avoid damage by striking the rack or dropping the canoe to the ground. This is achieved by having two people lift it, one at each extreme end. Since canoes are often dropped just after being lifted from a rack, it may be well to describe how this lift is effectively executed.

The two persons to do the lifting stand, one at each extreme end of the canoe, facing each other,,and therefore facing the length of the canoe. They should stand just beyond their own respective ends, and not a foot or two nearer amidships than the end, as is often done.

For convenience of description, it will be assumed here that the hand of each, which is nearest in the direction in which the canoe is to be moved laterally away from the rack, shall be referred to as the outboard hand, and that the remaining hand be referred to as the inboard hand. Each person will first place his inboard hand under the extreme end of the canoe where the stem joins the conoverged gunwales of the deck.

The outboard hand will then be placed on the curve of the stem, about where the water line would come if the canoe were carrying slightly more than an average load. The canoe is then lifted and both canoeists take one or two steps sideward to clear the canoe from the rack. It should then be turned over-upright position; with the hands placed as described above, the canoe will roll smoothly into the palm of the outboard hand.

The person in the direction of the water should then turn toward the water and carry the end of the canoe under his arm.

CHAIN-CARRIES

For carries of moderately long distance, a chain system can be set up; for example, four canoes can be carried by five canoeists. The canoes are placed right side up, on the ground, end to end. One canoeist lifts the after end of the last canoe. The other three canoeists will fill in the rest of the chain with a canoe end in each hand. This is often an efficient system. Assuming that in the above situation there were two canoeists to each canoe, there would be three left over to carry gear, too heavy to leave in the canoes.

ONE-MAN-CARRIES

For one-man carries there are several methods to discuss in some detail. For mature persons, one-man carrying is many times preferred when the canoe to be carried is not unduly heavy. Two men on a canoe trip should have a canoe of such weight that one can portage it while his partner portages the duffle.

When the distance the canoe is to be carried is very short, the canoe can be grasped by one gunwale, amidships, with both hands, shoulder width apart, lifted and carried with its bottom resting against one hip.

Another convenient method for carrying a light canoe a short distance is as follows: As it rests on a low rack or on

the ground, it is rolled up on one gunwale, topside facing the carrier. One shoulder is placed under the high gunwale amidships and the canoe is carried away. The kneeling cushion can be placed on the shoulder to contribute comfort.

The method selected for one-man carrying actually depends upon the length of the carry to be made, the amount of equipment the canoeist has with him, the location of the canoe, the size of the canoe, and the size, strength and agility of the canoeist. If the canoe to be used is on the top rack, one man moves it out toward the edge of the rack and then lifts it free by grasping both gunwales amidships and carrying the canoe overhead in a balanced position, both arms extended, elbows locked. This obviously is for a short carry. It requires good arms and good coordination. A trained canoeist develops good arms and the desired coordination comes through repetition. Overhead carries should not be attempted by the novice or the physically immature.

The above carry may be modified by lowering one arm until the hand is at the shoulder. Further modification, allowing a longer carry, can be accomplished by dropping the lower gunwale into the crook of the arm. A canoe can be taken from the roof of an automobile similarly.

On the return trip, the steps are reversed; the start is low and the finish high. It is necessary, therefore, to consider a method of getting the canoe to an overhead position, arms extended. As it rests on the dock or on the ground, top-

side up, the near gunwale is grasped amidships with both hands about shoulder width apart. The canoe is lifted a little so that its bottom rests on the knees. The canoeist should lean backward slightly in doing this to reduce the strain on his back muscles. Next, he pulls toward his body with both hands and hoists with one knee, to flip the far gunwale upward, high enough to be grasped by one hand. The canoe is then allowed to settle back on both knees and thighs. The grip of the hand on the near gunwale is then inverted. At this point, one hand is on the far gunwale, thumb inside, fingers outside, and the other hand is similarly placed on the near gunwale. The major portion of the weight of the canoe is resting on the knees and thighs. With the strength of the arms, aided by another lift of one knee, the canoe is swung overhead to an arm's extended position. It can be carried as described above andplaced on the rack.

Portages on canoe trips are often long and it is necessary for the canoeist to settle down to an extended carry which will test his stubborn endurance. For such a carry, the canoeist lashes two paddles between the thwarts located nearest amidships in the canoe. The flat blade surfaces must be located at a balancing position amidships, and be so placed that they will rest comfortably on the shoulders of the man doing the carrying. They may be padded if desired, for added comfort.

Once the paddles are adjusted properly, the canoe can be lifted to the overhead position described above and then lower-

ed to rest on the shoulders by means of the paddle blades. There is an easier method of getting the canoe up to this carrying position, however:

The canoeist stands facing the bow, approximately at the bow thwart or slightly forward of it. He grasps the gunwales and swings the end of the canoe up and overhead to the inverted position. He then works backward until the paddle blades rest on his shoulder just forward of the balancing position. The weight of his hands extended forward on the paddle shafts or inwales will bring the forward end down to a balanced position. If it is also desired to carry a pack on the man's back, the canoe can be placed with one end supported by the limb of a tree, the other on the ground, while the pack is taken on. This accomplished, the carrying position can be taken again. The same procedure can be followed for rests on long portages, in fact, special resting supports can be constructed alongside trails regularly used for portages.

It has been indicated above that one-man carries are not for the tyro, the physically immature, or the physically handicapped. Risk to the carrier and to the canoe exists whenever one person attempts a carry unless he is qualified by experience and physically. Strained backs and broken canoes are to be avoided. The following method of carrying demands restatement of the above admonition. It is only for the rugged and experienced canoeist and out-of-door man.

One day cruising often is done with a minimum of gear,

perhaps a spare paddle, a fishing pole, tackle box, and odds and ends of clothing. The carries on such a short cruise are not likely to be extended, and the canoeist may wish to make the carry in one trip, taking canoe and gear along together. This can be accomplished by carrying the canoe upright on the shoulder. The difficulty lies in getting it onto the shoulder. To do this, the canoe is grasped as for the overhead lift. It is then lifted vigorously upward, being aided with the thrust of one knee. As it starts upward, one hand and arm are placed quickly under the bottom to finish the lift in one continuous motion, ending with the canoe resting on one shoulder. It is carried on this shoulder, and if fatigue sets in, it can be transferred to the other shoulder by merely ducking the head under the bottom and sliding the canoe over to the other shoulder. Letting the canoe down from this position is accomplished by allowing it to slide dwon into the crook of one arm while holding the other gunwale with the free hand. As it slides still lower, both hands take over the entire weight of the canoe as it is put into a position for launching.

LAUNCHING

Launching methods must be discussed in some detail, because of the excessive damage which is commonly done to canoes in the launching and hauling out process. In fact, this unnecessary damaging of canoes is so prevalent that most people accept it as inevitable.

A common and harmful launching practice is that of lifting

the canoe by one end and pushing it on the other end, over a banking, across a sand or gravel beach, over the edge of a dock or pier, and thus into the water. Canoes so handled are badly worn at the end, the canvas is in varying stages of deterioration, sometimes completely worn through. This damage is most common among canoes with standard types of keels. Some canoe builders put on outside stems, an extension of the keel up around both bow and stern. This is a great protection to the craft, but should not be considered license to abuse it. The canoe can still be damaged by sharp stones, projecting nails, and the outside stem itself can, in time, be worn down to destruction.

TWO MAN LAUNCHING METHODS

The canoe has been carried to the canoe dock. It is set down gently on the dock. The canoeists move from their respective ends to take positions opposite each other amidships. Each grasps the gunwale on his side with both hands, and lifting, they together step the remaining distance to the edge of the dock. The forward end of the canoe is extended directly out at approximately right angles with the dock and placed on the water. Since the canoeists are supporting the canoe at amidships, one half of the canoe is clear of the dock. The other half is now fed out to the water, hand over hand, until all is clear. The freely floating canoe is held only at the extreme end. It is now swung around, downwind, or downstream, if current or wind exist, and brought gently alongside. During the entire opera-

tion, the canoe has not been allowed to bump, scrape, or in fact, even touch the dock. This type of launching can be done off any dock, pier, quay or banking, sufficiently low to accomodate small craft. If the terrain happens to be rough or strewn with debris or stones, the change from the ends to the amidships position of launching can be made by having each person work toward amidhsips, hand over hand, along the gunwales so that the canoe will not have to be set down.

For launching off a shallow beach, the canoe is brought to the floating stage in the same manner, but is kept at right angles to the beach with the on-shore end gently touching bottom, preparatory to boarding, which will be discussed in the next Chapter.

The above methods are the most adaptable to varying situations, but in brief, it may be said that any launching method that allows a canoe to be placed gently on the surface of the water with no banging or scraping, is satisfactory.

ONE-MAN LAUNCHING

One man launching is accomplished with the same care indicated above. Generally the carry finishes with the launching. Setting the canoe down on the ground, or the dock is ordinarily, unnecessary. From whatever carry may have been employed, the canoe is lowered to rest on one hip or both thighs, the hands holding the near gunwale amidships. Standing at the edge of the dock, the canoeist, hand over hand, feeds the canoe into the water as described in the two man launching. It must be allowed to

slide along his thigh to keep it clear of the edge of the dock.

A more advanced method convenient when the dock or launching area is not too high above the water, is the parallel launch. From a position amidships, both hands on the near gunwale, the bottom resting against the thighs, the canoe is swung out over the water, aided by pressure with both knees. It is then set down gently, afloat parallel to the dock.

Since lifting the canoe out of the water is the reverse of launching, little need be said about it. The same care to avoid contact with the ground or dock is necessary. For example, two canoeists taking their canoe out of the water would operate as follows: one would swing the upwind or upstream end out away from the dock with a gentle push of hand or of paddle. The other would raise the bows or the opposite end and bring it in over the dock. Both canoeists would then lift opposite each other, working hand over hand along the gunwales to the balancing point amidships, thus bringing the remainder of the canoe out of the water. Then they would carry the canoe a few paces clear of the dock's edge and shift to the end carrying position.

CHAPTER FOUR

BOARDING AND POSITIONS

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BOARDING AND POSITIONS

The annual drowning statistics do not indicate the circumstances under which drownings occur. The observations of water safety people, however, concur that canoes are involved in a large number of drownings. The types of canoeing accidents contributing to drowning, though varied, nearly all involve the factors of top heaviness over loading, and improper positions in the canoe. Lack of training and experience go hand in hand with these. This chapter aims directly to combat these unsafe practices. Its content, however, aims also at refinement of skills, and increased enjoyment of the sport.

BOARDING METHODS

Anyone who has observed a novice attempt to get into a canoe from shore, or from a dock, can appreciate that capsizings are not rare at this initial stage of a canoeing trip. In the case of non-swimmers who unwisely go canoeing, a fatality might result at this point. The teaching of safe methods of boarding a canoe is not designed for this group, however, for non-swimmers should not be allowed in any type of small craft except in the company of a trained lifesaver. For other people there is at least a small element of danger in capsizing along the dock, and if nothing else it is embarassing.

To board the canoe, the canoeist stands on the edge of the dock facing the bow, that is which ever end is to be paddled foremost. It may be the bow or stern, since both are alike. If he is going out single, he stands opposite the amidships part of the canoe, if tandem, opposite the bow or stern position, whichever is to be his. Keeping the body weight on the inshore leg, the other is extended to place the foot on the bottom of the canoe directly over the keel or the median line. Then the weight is transferred from the on-shore foot directly downward onto the one in the canoe. At the same time the gunwales are grasped, one with each hand, and the onshore foot is brought in and placed alongside the other, on the median line of the canoe. A position on both knees is then taken. Placement of the feet on the median line of the craft when getting in is important for stability. To step off to the side might result in a capsizing. It would at least cause the canoe to list sharply and slide out away from the dock thus probably dumping the canoeist into the water, or causing him to lose his balance and fall into the water, or half into the water and half into the canoe. When two people are to get in, the bowman gets in first. The sternman holds the canoe alongside the dock until the bowman is in position and then takes his place in the stern. If a passenger is to be taken, he is helped in before the paddlers get in. The canoe is held firmly alongside the dock.

The passenger gets in as described above, but immediately takes a position seated in the bottom of the canoe. Help can be given by the paddlers and brief words of instruction may be offered.

Luggage of any appreciable weight is loaded after the canoe is afloat, but before the canoeists board it. Reaching from the canoe to the dock to lift in a heavy pack may cause a capsizing.

Getting out of the canoe onto the dock or landing place is done with the same care. First the passenger, if there is one, places one hand on each gunwale and rises to a crouched position on both feet which should be close together over the keel. One foot is extended over the side and placed on the dock. The paddler nearer the passenger takes one of the passenger's hands, if desired, though this is not necessary. The weight of the body is transferred from the foot in the canoe to the one on the dock, and both hands are at the same time placed on the dock, and the other foot taken from the canoe. If it is desired, the sternman may get out first, using the getting in process reversed. From the dock he can more easily help the passenger out. When this is accomplished, he can hold the canoe alongside while the bowman gets out. This latter procedure is generally used if all are to get out, the former if just the passenger is getting out, although the sternman, if desired, can get out to help the passenger and then get back in again.

In the previous chapter launching a canoe from a shallow beach was described. Boarding a canoe under these conditions involves a procedure different from the one outlined above. The canoe is at right angles to the shoreline with its inshore end resting lightly on the bottom. The inshore end should ideally be the bow. This is easy to arrange when launching the craft. The bowman holds the bow on shore by bracing between his knees that part of it which overhangs onto the shore. The sternman touches the sole of his mocassin to the surface of the water to remove the sand and places that foot into the canoe grasping both gunwales with his hands. The other shoe is similarly cleaned, and the sternman starts toward the offshore end which is in deep water. He keeps contact with both gunwales and walks along the median line of the canoe to take his position at the stern facing towards shore. The bowman gets in in the same manner, and with the same precautions. He moves aft toward the sternman until the bow is floating. He does not shove the canoe off the beach. The sternman takes a couple strokes astern to assure that the canoe is out of the extreme shallows, upon which the bowman then takes his place at the bow.

To land on a shallow beach, the approach is made at right angles. The canoe is stopped just as it touches bottom, so that no scaping or sanding of the bottom of the canoe occurs. The bowman steps out and holds the canoe as before while the sternman moves forward to get out. The bowman must

not draw the bow up on to the beach after getting out, merely because he observes that it rises clear of the water because of the weight of the sternman at the other end. To do so would ground the canoe near midships, rather than at the extreme bow. This can result in damage to the bottom when the sternman walks forward to get out.

The above two general methods of launching and landing, and getting in and out can be used with minor modifications to meet all situations. For example, on a canoe trip, wooden dock structures generally will not be available nor will smooth even beaches. Rocky shores may present themselves. This will not be a difficult situation with which to contend. The launching, landing, and getting in and out, can be done at a flat rock near shore or at a projecting banking. On shallow but stony beaches the canoeists can bring the canoe around parallel to the shore and step out into shallow water rather than to allow the canoe to ground itself on the stones. Judgment is the important thing, and remembering that the canoe is designed to carry its load only when fully waterborne, and not when resting on bottom, or on rocks.

POSITIONS IN THE CANOE

Sitting on the seats is a position nearly all untrained canoeists assume in the canoe. The seats are provided so they sit on them. The birchbark canoe did not have seats, but somewhere in the transition from bark to canvas, seats came into existence. The American Indian kneeled in the bottom of

his canoe. So do trained canoeists among our civilized population. Trained canoeists could sit on the seats, if they wished, like the vast untrained majority, and with much more safety than the untrained majority, but the art of paddling is poorly developed and applied from a seated position, so skilled canoeists ignore the seats, considering them only as braces to strengthen the hull.

There is another factor involved in sitting on seats which is largely responsible, for the capsizings that have caused the thousands of drownings through the years. It is the factor of top heaviness. If a ship's cargo were loaded on its maindeck instead of down in the hold, the ship would roll over before it had cleared port, probably before casting off from the pier. Sitting on seats in the canoe is like loading the cargo on the main deck. It is small wonder so many capsizings occur.

<u>One Man Position</u>

The proper cruising position in a canoe, is kneeling on both knees on the bottom, buttocks resting against, not sitting on a thwart or seat edge. The knees on the bottom contribute the needed stability to the craft. For one-man paddling this position should be as near as possible to midships. The location of thwarts will control this. Many experienced canoeists move the midships thwart about a foot aft of its original position at the exact fore and aft center of the craft. This permits kneeling forward of it at the

exact center of the canoe, from which position the canoe is most easily handled by one man. If the midships thwart is not relocated in this manner it is not advisable to kneel forward of it, for to do so would put the canoe down heavily in the bow. It is better to select another thwart, the one nearest midships. The canoe can be handled well from this position except in a strong head wind, in which case kneeling forward of the midships thwart may be best.

Tandem Positions

For tandem paddling the kneeling positions are forward of the seats generally sat upon by the inexperienced, or the thwarts similarly located in canoes not provided with seats. The kneeling position is the same as discussed above.

Relief Positions

It will be necessary to relieve cramped muscles and sore knees developing from the kneeling position by using various modifications of it. One leg can be extended, still keeping the other knee on the bottom, for the required stability, and base for sufficient paddling. While paddling on the left side, the right knee can be extended. The left leg can be similarly rested later when the paddling is being done on the right side.

After considerable experience, the racing position can be practiced and used on both sides. This position is analyzed in detail on the chapter on Racing. Also after considerable all around experience, the standing position can be used with

a long paddle. This requires a maximum of at-homeness in the craft and it is not for the novice. It is discussed in the chapter on Recreational Canoeing.

CHANGING POSITIONS IN THE CANOE

Changing positions in the canoe while afloat is not dangerous, if the proper methods are used. In addition, it is often desired to change positions, in order to give paddling experience in both positions, and to provide the relief coming with a change. The change is done in the following manner: The bowman stows his paddle in the bow, or places it in the canoe amidships, if it is a favorite paddle, and he wishes to use it when he has changed to the stern position. The sternman keeps his paddle in the water for control and stability. The bowman then places his hands on the gunwales and rises to a crouched position, feet close together over the keel, and then steps backward over the bow thwart to take a seated position in the bottom amidships, hands on the gunwales. His seated position should be slightly toward one side to leave room for the sternman to step by him. He should also be prepared to drop one hand off the gunwale when the sternman steps by him. When the bowman has reached this position, the sternman stows his paddle, or places it in the canoe amidships if he is to use it in the bow. In the latter case the bowman should relay it along to the bow. The sternman then places both hands on the gunwales and rises to a crouched position and walks forward on the median line of

the canoe, keeping his hands on the gunwales at all times. When he reaches the seated bowman, he steps around him, and continues on to the bow position, where he takes the correct kneeling position, mans his paddle, and gets it promptly into the water, for control and stability. When this has been accomplished, the man sitting in the bottom steps backward, while keeping contact with the gunwales, and takes his new position at the stern, where he mans his paddle, and thus completes the changing of positions.

KNEELING CUSHIONS

Kneeling cushions and a degree of stubbornness to last out the uncomfortable period of getting accustomed to kneeling for long periods of time are necessary. Cushions can be made of cork shavings or ground cork covered with canvas. A good cushion can be made by inserting sponge rubber in a section of rubber cut from an automobile inner tube. Vulcanizing is necessary in order to make the covering waterproof, for in the event that the pad should get wet, the sponge rubber will be slow to dry. In an emergency, a rubber hot water bottle can be filled with sawdust and suffice as a satisfactory cushion. A good cushion can be made by sewing together three or four household type sponge rubber pads and covering them with cloth. This cushion, however, must not be allowed to get wet.

POSITIONS FOR DOUBLE BLADE PADDLING

One man, paddling alone, kneels at or near midships for double blade paddling the same as for single blade paddling. He may use the position on both knees, or on one knee with the other extended for relief, or in the high kneeling racing position, though the latter is not so efficient with spoon double blades as with straight double blades, and is unusually tiring in either case.

A low seat makes double blade paddling most efficient and most comfortable, and adds to power rather than detracting power contrary to what is true about single blade paddling. This is because of the additional leverage provided by the braced feet. Claussen, a skilled double blade paddler describes the seat very effectively. "Paddling seats are usually homemade, about 14 inches wide by 12 inches from front to back; 6 inches high at the back and sloping to 4 inches high at the front. A piece of stout canvas is stretched over the sloping top edge of the frame, turned down about an inch around the sides, and doubled so that it can be securely nailed. The bottom edges of the frame are usually shaped somewhat to conform to the bottom of the canoe and are often provided with a felt strip to further aid the fit and prevent slipping."[1] A good general rule to follow in judging

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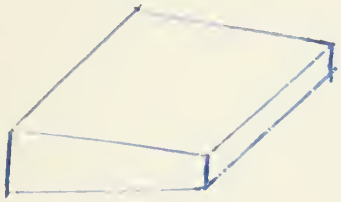
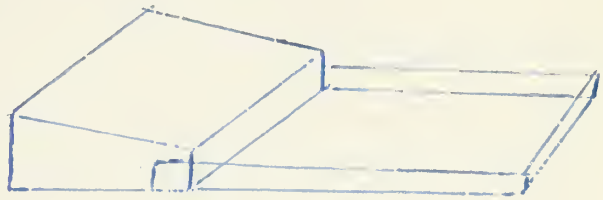
[1] W. VanB. Claussen; Canoeing, Page 21-22, Merit Badge Series, Boy Scouts of America, Two Park Ave. N. Y., N. Y.

the height of the seat is to plan it so that, in use, it will allow the paddler to sit with an elevation sufficient to place his lap in approximately the same horizontal plane as the top edges of the gunwales so that he may paddle with plenty of clearance over the sides of the canoe.



Simple type of paddling seat



Seat with foot brace attached

CHAPTER FIVE

STROKES

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STROKES

There are many skilled paddlers, with years of background in canoeing, able to control the canoe with precision, even under difficult conditions, who very likely could not give names to all the paddling strokes. Their use of a paddle is an automatic reflexive activity. Combinations, modifications, and refinements of strokes, are used often in rapid succession to guide the canoe or move it in exactly the manner desired, with little thought given to the strokes used. At the opposite extreme are people who in their profound unawareness think that paddling is merely a dumb, oxlike repetition of beating the water with a flattened out club.

It cannot be expected that a novice can learn rapidly to handle a paddle with the finesse of those who have spent years in this activity. Under competent instruction his learning may well be more rapid than theirs, however, since very probably their knowledge and skill came over long years of working things out for themselves. For efficient teaching it is necessary to break down the art of paddling into various precisely executed and named strokes.

THE BOW STROKE

The bow stroke is designed to move the canoe ahead with no special consideration given to steering it. It is the

stroke used by the bowman, and in fact by all paddlers, in any size canoe with any number of crewmen when the canoe is being propelled directly ahead. The exception to this is the stroke used by the sternman, but this is to be discussed later. The bow stroke, though usually considered the simplest of all strokes, is really a crew stroke, a power stroke, and the foundation stroke for all others. Its most efficient execution comes only after considerable training under the supervision of a coach or a competent instructor. The maximum efficiency is not necessary, however, for the average person to develop reasonable skill as a paddler. Since this stroke is of such basic nature, however, considerable analysis and comment is considered advisable here.

One hand grasps the hilt or grip of the paddle, and the other hand grasps the shaft several inches above the blade. The hands, thus placed, should not be more than slightly farther apart than the width of the paddler's shoulders. The novice practice of placing the lower hand at the junction of the shaft and blade is productive of inefficiency in the expenditure of energy. It shortens the length of the power interval in the stroke, and places the burden of work on the lower arm, by forcing the top arm up into a position of mechanical disadvantage. It is important to remember here that the paddle should not be shorter than the paddler's chin nor longer than his full height. It will generally be found

that a paddle the height of a man's forehead is best for all-around use, though a short but powerfully built man may find a paddle slightly longer than his full height to be most desirable.

Holding the paddle correctly, the bottom arm is extended forward full length, with the upper arm bent so that the fist is directly in front of the shoulder, elbow about shoulder height. This is the starting position. The blade, all of it, bites the water as the bottom arm pulls directly backward and the top arm drives out from the shoulder like a fighter's left jab. The top arm is expected to do fully as much work as the bottom, and for a long time, until the muscles involved are built up, the paddler will think it is doing more. The top arm action is difficult to describe to the satisfaction of everyone. If it is remembered that the movement of the top arm must be so directed as to not only exert steady power, but to allow the blade to remain vertical and close to the side of the canoe, many seeming differences in description will be dissolved. The drive must be diagonally forward, ending when the arm is fully extended, and out over the water. The bottom arm pulls backward until the hand is at, but not beyond, the thigh or hip. The effective power interval of the stroke is from the extreme forward part to just slightly beyond the vertical position of the blade. This is the reason for not continuing the bottom arm pull farther than the hip. It must be remembered that in stroking, the paddle is not

pulled through water, but that the paddle blade bites the water, or is inserted in it, almost as though it were a solid rather than a liquid, and the canoe is pulled forward to the place where the paddle grips the water. It can be seen then that if power is exerted much beyond the vertical that the stern of the craft will thus be drawn down into the water, producing a drag and putting undue movement or bobbing into the craft.

At the end of the stroke, both arms are relaxed completely, the top arm dropping as though into the canoe. As the bottom hand and arm relax, the buoyancy of the paddle will cause the blade to rise promptly but gently to the surface. The recovery is made by feathering the blade over the surface of the water to the starting position. Recovery close to the water, and complete relaxation, are essential to smooth, graceful, and sustained paddling.

No body motion is necessary with the bent upper arm method of paddling. Only a slight rotation of the trunk and shoulders accompanies the arm action. Elimination of crude body motion lends to the grace and smoothness of efficient paddling. People familiar with the refinements of crawl swimming know that a relaxed, but quick, recovery in the arm stroke is essential. The same is true in paddling.

THE "J" STROKE

The J-stroke is the steering stroke employed to keep the canoe on a straight course. It is used almost continuously

when paddling alone in a canoe, and when needed, if paddling in the stern position, as a member of a crew.

In Single Paddling

Since it is impossible to paddle directly under the keel of a canoe, a paddling stroke tends to throw the canoe off course in the direction opposite the paddling side. Something must be done, therefore, to keep the canoe on a straight course. Most beginners solve the problem by paddling first on one side and then on the other, or by trailing the paddle astern at the end of each stroke, using it as a rudder. This practice is extremely inefficient. It drags the canoe down, and devotes as much time to steering as paddling. It is laborious and unsatisfactory. The steering stroke, called the "J-stroke" is employed by trained canoeists. It has been so named for lack of a better name, or possibly because in its unrefined form, it may actually prescribe a J, that is when it is done on the left side. This stroke is best explained in conjunction with a demonstration, or underwater photography. Briefly, it is a stroke that starts as a bow stroke and half way to its completion changes to resemble a reverse sculling stroke. In detail, it is as follows: The first half of the power part of the stroke is the same as the bow stroke, except that an effort is made to paddle as much under the canoe as possible. Getting the top hand well out over the water accomplishes this. At times it may be necessary to start the stroke slightly away from the bow, pulling in toward the bow

before following on through, in order to hold the bow over toward the paddling side. This will depend upon existing conditions. About half way through the stroke, the inside edge of the blade is slowly turned aft about seventy degrees. This is done by flexing both wrists. Toward the end of the stroke, the shaft of the paddle slides along the gunwale for a distance of six to ten inches, aiding the effectiveness of the reverse sculling aspect of this stroke and normally eliminating the necessity of prying on the gunwale at the completion of the stroke. This method of paddling combines steering with forward driving force, that is, there is no separate added interval for steering as is the case in drag steering. It is smoother, more efficient, and consequently much faster. The amount of leverage applied against the gunwale depends upon how much is needed to keep the canoe on a straight course. If the wind is blowing in from the starboard side, the canoe will ordinarily run to starboard. In this case, paddling on the port side will require considerable leverage. Paddling on the starboard side may require nothing more than an ordinary bow stroke most of the time.

THE J-STROKE IN TANDEM OR CREW PADDLING

The sternman in a crew or even in a tandem setup uses the J-stroke, but only when it is necessary. Quite often the canoe runs true, because of proper position and balance of the crew, in which case the ordinary bow or crew stroke is all that is necessary.

THE BACKWATER STROKE

The backwater stroke is used to stop headway or to make way astern. Movements involved are the reverse of those used in the bow stroke. The backwater stroke starts where the bow stroke finishes. Pressure is exerted forward with the bottom arm and backward with the top arm; the bottom arm pushes forward, while the top arm pulls backward. The recovery is from forward to aft, and the blade is feathered or not as the paddler wishes. If there is much way on the craft, the backwater stroke will be merely holding. It will not be possible to follow through until the craft has been nearly stopped. Once stopped, the craft will make way astern with repeated backwater strokes.

SWEEP STROKES

Sweep strokes as the name implies are wide sweeps of the paddle to swing the canoe for turns, to maneuver among obstacles, to follow along the bends of streams or rivers, to effect sudden changes of directions in formation paddling, to aid in holding a straight course with cross winds, and for general incorporation with other strokes as may be necessary for precise control of the craft.

FULL SWEEP

A full sweep covers an arc of 180 degrees, that is from directly ahead to directly astern. It is used only by one man when he is paddling alone and from a position at or near midships, which is the pivotal point of the craft. Properly

executed, the stroke is performed as an arc of a circle. The same basic arm movements are employed as in the bow stroke, except that the top hand pushes out from near the waist rather than from the shoulder, and the bottom arm swings wide over the water, allowing an acute angle and a broad sweep away from the side of the canoe. The first ninety degrees of the sweep from directly ahead to broad on the beam pushes or swings the bow of the canoe in the direction opposite the paddling side. The second ninety degrees of the sweep from broad abeam to astern draws the stern toward the paddling side. If a keeless canoe has no way on, it can be turned completely about with this stroke, practically in its own water, that is on its own pivotal axis.

It is obvious then that one man in proper position at or near midships can use the full sweep or any number of degrees of it according to his need, and at any part of his regular stroke. For example, a sweep of small degree at the forward part of his stroke may be necessary to hold the canoe on its course. The stroke which thus starts as a sweep may finish as an ordinary bow stroke or even as a J-stroke. Similarly, a stroke started as a J-stroke may change to a sweep at any time if conditions of current, wind, waves, or obstructions suddenly demand it.

SWEEPS OF NINETY DEGREES AND LESS

In tandem paddling, sweeps of more than ninety degrees are not necessary, and in fact, if more than ninety degrees,

may prove relatively ineffective or even detrimental. The bowman executes a sweep stroke from directly ahead to directly abeam of his own position. Since his paddling position is considerably forward of the pivotal point of the canoe, any stroke going farther aft of his position than described above will tend to neutralize the stroke, because whereas the proper sweep, starting directly ahead and going ninety degrees, ending abeam of the paddler, swings the canoe in the direction opposite the paddling side, any sweep aft of this will have to be directed in toward the canoe, and therefore, will tend to pull the bow back toward the paddling side.

The sternman's sweep starts abeam of his own position and goes ninety degrees to astern, pulling the stern over toward his paddling side. Any sweep starting forward of this will have to start near the side of the canoe and move out away from the canoe, thus tending to push the stern of the craft in the direction opposite his paddling side. The two elements put together neutralize each other, therefore, it is inefficient for the sternman to start a sweep stroke forward of a position at right angles to his own position in the canoe.

Both bowman and sternman may use efficiently sweeps of less than ninety degrees if only a small change in course is desired. The sternman particularly may desire to change his intended J or crew stroke to a sweep of small degree if such is necessary to steer the canoe. In fact, a sternman uses bow, J, and sweeps of ninety degrees or less, interchangeably as conditions may demand.

REVERSE SWEEPS

A reverse sweep, as the name implies, is opposite to a sweep, for example, a reverse sweep of 180 degrees, used by a single paddler in his proper position at or near midships starts astern and prescribes a half circle ending at the bow. A sternman using a reverse sweep starts the sweep astern and ends it abeam of his position in the canoe. A bowman starts his reverse sweep wide abeam of his position and ends it at the bow. In each case the effect upon the canoe is opposite to the corresponding sweep stroke.

DRAW STROKE

The draw stroke is employed to move the canoe sideward in the direction of the paddling side. The paddle blade is extended sideward, that is directly abeam of the paddler's position in the canoe. The bottom arm is extended full length, as in the bow stroke and the top arm is bent at the elbow so that the fist is in front of the shoulder. The trunk is rotated comfortably toward that side. As the blade grips the water, the bottom arm is pulled directly in toward the canoe, and the top arm drives out from the shoulder directly abeam. To recover for another stroke, the top arm is dropped toward the bow, and the bottom arm and hand are relaxed completely. The paddle blade will slice up to the surface farther aft, and recovery is made by feathering the blade close over the water to the position for another draw stroke. If desired, recovery can be made through the water, rather than over it. This is

slightly less efficient because of the resistance of the water, but has its value under certain conditions. At the end of the draw stroke, the edge of the blade which is toward the bow, is turned away from the canoe ninety degrees, and sliced laterally through the water to the starting position.

The draw stroke can be modified to a diagonal draw. Occasionally, it may be desired to move the canoe slightly forward, or backward, while drawing it sideward. In this case, the draw is used as described above except that it may start from forward or aft of the true lateral position mentioned above. It must, however, normally finish at the paddler's thigh or hip, as does the regular draw. The over-water recovery is the same for the diagonal draw as for the regular draw, but the underwater recovery must be described briefly. It was stated above that for underwater recovery, the edge of the blade nearest the bow is turned away from the canoe ninety degrees, and sliced back to the starting position. Any diagonal draw forward of the lateral one involves the same procedure for underwater recovery. Diagonal underwater recoveries aft of the lateral, however, are made more easily by turning the edge of the blade nearest the stern outward, away from the canoe, and slicing back to the desired position for the next draw.

PUSHOVER STROKE

The pushover stroke is the opposite of the draw stroke, being employed to move the canoe in the direction opposite the

paddling side. The paddle blade starts under the side of the canoe, the top arm out over the water. The push, directly abeam, is exerted with the bottom arm, while the top arm is pulled in toward the paddler. This pushes the canoe in the desired direction, opposite the paddler's side. If desired, the gunwale may be used for leverage in this stroke. Recovery is most easily accomplished through the water by turning the edge of the blade nearest the bow ninety degrees in toward the canoe and slicing it back to the starting position. Over water recovery is sometimes used. In this case, the blade is sliced into the water from aft of the paddler's position.

As in the case of the draw stroke, the pushover stroke may be modified to become a diagonal pushover, by pushing out forward or aft of the directly abeam direction. This may be necessary at times because of conditions of wind or current, or when it is desired to move the canoe somewhat forward or astern while at the same time moving it sideward.

THE SCULLING STROKE

The sculling stroke, or draw scull, as it might be named, is designed to move the canoe sideward in the same manner as the draw stroke, but it is more efficient than the latter since there is practically no negative phase to it and no significant recovery interval. The paddle is inserted in the water vertically a comfortable distance from the side of the canoe, abeam of the paddler's position. It is moved fore and aft repeatedly in a path parallel to the vertical plane of the

keel of the canoe. This path is about three feet long. The paddle blade is kept at an angle from twenty to forty-five degrees to the path of the stroke, with the leading edge turned away from the canoe. This means that as the paddle moves forward, the edge of the blade nearest the bow is turned away from the canoe forty-five or less degrees, and as the paddle moves aft, the edge of the blade nearest the stern is turned away forty-five or less degrees. The same pressure is exerted as in the draw stroke, but the paddle, because of the angle of the blade, keeps its distance from the side of the canoe, while at the same time it draws the canoe toward the paddler's side. Situations may be encountered where one end of the canoe or the other will swing, or come over too fast. Varying the degree of the angle of the blade will rectify this condition and permit an exactly lateral movement to the canoe. For example, if the bow is lagging behind, the angle of the blade should be increased about ten degrees on the forward part of the stroke only.

Sculling with a paddle is not a figure of eight movement when done efficiently. The paddle is kept in a vertical position and its path of movement is in a straight line fore and aft. The change of angle is executed sharply at the end of each movement, before the start of the next. Any fancy swirls deduct from the effectiveness of the stroke.

Sometimes it is desired to move the canoe forward or backward while sculling it sideward, as in the case of making a precise landing at a given section of a dock or pier. Similarly, the wind or current may occasionally cause the canoe to make way ahead or astern while the paddler is sculling it sideward. Fore and aft control in these situations is possible by varying the degree of the angle in sculling. For example, if the paddler observes that as he sculls the canoe sideward, the current is causing it to make way astern, he can check this and keep it going directly sideward by increasing the degree of angle of his sculling stroke on its portion which moves toward the stern.

THE REVERSE SCULLING STROKE

The reverse sculling stroke has the same function as the pushover stroke. It moves the canoe laterally in the direction opposite the paddler's side. The position of the paddle in the water, and the path of movement, are the same as in the sculling stroke discussed above. The angle of the blade is similarly anywhere from about twenty to forty-five degrees, but toward the canoe rather than away from it. That is, as the stroke is executed repeatedly fore and aft, the leading edge of the blade is always angled toward the canoe. The mechanics of pressure are similar to those involved in the pushover stroke. The bottom arm exerts pressure laterally away from the canoe; the top arm exerts pressure toward the canoe. Modifications to meet challenging conditions of wind and water are the same as described for sculling.

STATIONARY DRAW STROKE

It is often necessary to move the canoe sideward while under way, without changing its heading. This is particularly true when paddling in rapids or in a deep fast current. When an obstruction such as a rock or submerged log or stump, is observed close directly ahead, attempting to avoid it by steering the canoe around it may invite danger. When the bow is turned to avoid the obstruction, the speed with which the canoe is traveling will nearly always result in its striking the obstruction farther aft, probably at midships or on toward the stern. This happens before the stern end can be swung by to avoid it. On the otherhand, if the entire canoe is moved sideward, the obstruction can be avoided and the same course maintained. When paddling alone, moving the canoe sideward is accomplished with a stroke called the stationary draw. The paddle blade is inserted in the water vertically a comfortable distance out from the side of the canoe abeam of the paddler's position, as for the beginning of an ordinary draw stroke. The forward edge of the paddle blade is turned outward about forty-five degrees. The bottom arm must hold rigidly with pulling pressure toward the canoe. The top arm also must hold rigidly with pressure exerted outward. The paddle in this way acts as a rudder moving the canoe sidewards.

In tandem paddling when the bowman executes a stationary draw, just the bow comes over, because the bowman is located considerably forward of the pivotal point of the craft. If

the canoe is to be moved sideward in this case, the sternman will have to employ a stationary pushover stroke described below, or he may use a reverse sweep, or use his paddle as a stern rudder.

THE STATIONARY PUSH OVER STROKE

The stationary push over stroke is the opposite of the stationary draw. It is designed to move the canoe sideward in the direction opposite the paddler's side, when the canoe is under way. If a single paddler, paddling at the proper position, at or near midships, suddenly sighting an obstruction directly ahead, decides that it can most easily be avoided by moving the canoe sideward in the direction opposite his paddling side, he may prefer not to use the stationary draw described in the previous section. The stationary push over will be the stroke preferred. Other obstructions sighted farther on may influence this decision since ordinarily the stationary draw is the more dependable and more easily executed.

To perform the stationary push over, the paddle blade is inserted vertically in the water, close to the side of the canoe, as for the beginning of the regular push over stroke. The shaft is allowed to press firmly against the gunwale of the canoe. The forward edge of the blade is angled about forty-five degrees toward the canoe. Both arms are braced rigidly. The paddle in this position acts as a rudder to move the canoe sideward in the direction opposite the paddling side. This is an infrequently used stroke, and should be

practiced after mastery of most other strokes, since a novice is apt to have the paddle torn loose from his grasp or himself precipitated into the water, if the canoe is traveling fast and he is not properly braced for the execution of the stroke.

In tandem paddling, if the bowman employs the stationary push over, it will be necessary for the sternman to employ the stationary draw. The two working together will move the canoe sideward as desired to avoid the danger ahead.

BOW RUDDER STROKE

The bow rudder stroke is designed to move the bow of the canoe abruptly toward the direction of the bowman's paddling side, when the canoe is underway with at least moderate speed. It has the same effect as the stationary draw when the latter is employed by the bowman, or the same effect as the reverse sweep employed by the bowman when the canoe has little or no way on.

It is executed by placing the paddle blade in the water at an acute angle with the bow, approximately forty-five degrees. The blade is in the vertical plane. The shaft is braced against the gunwale of the canoe by hooking the thumb of the lower hand over the gunwale. With the paddle firmly held in this position, the bow will be drawn over sharply toward the bowman's paddling side.

CROSS BOW RUDDER STROKE

The cross bow rudder stroke is the opposite of the bow

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rudder stroke. It is designed to move the bow abruptly in the direction opposite the bowman's normal paddling side.

It is executed by swinging the paddle over to the opposite side of the bow and placing the blade in the water as described for the bow rudder stroke. Hand positions on the paddle are not changed. The shaft is ordinarily braced against the gunwale by pressing the heel of the bottom hand against the inside of the gunwale while keeping the fingers securely wrapped around the shaft.

REVERSE "J" STROKE

The reverse "J" stroke is not a conventional stroke. Many canoeists have probably never thought about it or had need for it. It is designed to keep the canoe going on a straight course while paddling it backward. It is ordinarily useful only for one man paddling.

For the execution of this stroke, the canoeist is in the correct single paddling position, at or near midships. His paddle blade is placed on the water a comfortable distance aft of his position in the canoe as for the beginning of a normal backwater stroke. The blade is pressed forward as in the backwater stroke, but about half way through the stroke, the edge of the paddle nearer the canoe is turned gradually forward toward the bow, the amount necessary to keep the canoe going on a straight course astern. The shaft may be allowed to contact the gunwale toward the end of the stroke, if necessary for leverage. As in the regular "J" stroke, it may be

necessary to alter parts of this stroke according to conditions that prevail, for example, it may be necessary to press in toward the stern before pressing forward at the initial part of the stroke.

"INDIAN STROKE" (SILENT PADDLING)

The socalled "Indian stroke" is a method of paddling in which the paddle blade remains in the water at all times. It is not often used because of its inefficiency. Most people are familiar enough with swimming to know how superior the crawl strokes are to other styles of swimming. An important contributor to this superiority is the overwater arm recovery. The same thing is true with paddling. Under water recovery with the paddle blade involves resistance of the water to the movement of the paddle blade through it. This resistance is transmitted to the craft which consequently is slowed down. The "Indian Stroke" has its place as a silent method of paddling, however, for example, in the case of a hunter stalking game, or a photographer stalking wild life for a closer "shot".

The execution of the positive phase of this stroke is for all practical purposes the same as that of any other stroke. In fact, the "Indian stroke" is not a stroke but a style of paddling. It is therefore necessary only to describe the recovery phase which is the element that differs from ordinary paddling. At the completion of the positive phase of the stroke, the paddle blade is not lifted from the water as is

normally the case. The blade is turned and the recovery is made through the water with one edge of the blade beading and knifing its way back to the starting position. It is important that the paddler make sure that the edge of the paddle is slicing the water at the surface rather than permitting the shaft to slice the water at the surface. In the latter case, there will be a certain amount of noise which is intended to be eliminated.

Another important thing to consider in achieving the greatest degree of silence with this stroke is to make sure that the whole paddle blade is beneath the surface of the water during the positive phase of the stroke.

"DRAG" STEERING (Stern rudder)

Drag steering or stern rudder steering is ordinarily frowned upon by canoeists. It is usually a habit of which the unskilled paddler has to be broken. It is inefficient when used under most conditions. It does keep the canoe on a straight course, however, and has at least three good uses. One is in shallow water with a muddy, weedy bottom. A second is in rock strewn water of shallow or variable depth. The "J" stroke used in the former would probably get the paddle blade fouled with weeds because of the twisting motion. In the latter a soft wood paddle, if twisted between two rocks, would be split. Drag steering in these cases may be wisely resorted to at intervals. The third use and a much more commonly needed use is for a stern paddler. When his bowman

employs a stationary draw stroke, or bow rudder stroke, to avoid an object sighted directly ahead and close, the stern-man may use a stern rudder stroke to move his end of the canoe sideward in the same direction.

There is no special technique to describe for this type of steering. It is merely trailing the paddle astern at the end of a stroke and using it as a rudder to move the stern as desired.

DOUBLE BLADE PADDLING

Double blade paddling is superior to single blade paddling for speed and control of the canoe on open water, particularly large bodies of water, and especially when wind and waves are high. The blades are set at right angles to each other so that when one blade is pulling the other will cut through the wind rather than butt it. It is not necessary to explain in detail the process of partial rotation involved in paddling first on one side and then on the other alternately. It is enough to say that the shaft between the two blades should be grasped in both hands, with hands about shoulder width apart and equidistant from the blades. One hand acts as the control hand, that is the grip is constant with no rotation of the shaft in the hand. The shaft does make partial rotations, back and forth in the other hand. These partial rotations are effected by raising and lowering the control hand in a rotary manner. The strokes are like the sweep strokes in single blade paddling. At the start of a stroke the bottom

arm is extended full length and forward. The top arm is bent at the elbow so that the fist is forward of the arm pit. The stroke is effected by pushing with the top arm and at the same time pulling with the bottom arm. When the bottom arm completes its pull the hand will be at the hip. The hand is then simply raised from the hip to the position just forward of the armpit and is thus ready to begin the stroke on the other side. With the low sweeping angle indicated above no drip cups are necessary. Spoon blades are superior to straight blades. With a paddle on both sides of the canoe there is less of a variety of strokes used than is the case in single blade paddling. Backwater strokes are necessary, and the draw stroke, and sculling may be employed at times. A straight course is maintained by pulling equally on both sides under normal conditions. If the canoe is running off course because of adverse conditions of wind, waves or currents, strokes on one side may be made stronger than on the other side or the shaft may be extended farther on that side to supply favorable leverage. Turns are made by backing on one side and pulling on the other.

CHAPTER SIX

SELF RESCUE

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SELF RESCUE

Skilled canoeists ordinarily have little need for self rescue techniques. Skill, however, does not come abruptly in canoeing any more than in any other activity; therefore, self rescue methods should be learned and practiced along with the other skills involved in making an all around canoeist. They are so closely related to the skills involved in the rescue of other people that they can scarcely be dispensed with in any event.

ENTERING DEEP WATER FROM THE CANOE AND BOARDING IT FROM DEEP WATER

Usually it is not necessary to go overboard from a canoe, and as a general rule it is not a wise practice. Most camps forbid it as part of their safety program. There are, however, occasions when going overboard may be desired, and if properly done, little danger is involved. Occasionally a paddler may wish to take a dip. The bathing conditions near shore may be poor; a muddy or rocky bottom would not be inviting or safe in some cases. The deeper water offshore may be clear and tempting. If the correct procedure is followed, it is entirely safe for a healthy swimmer to go overboard for a swim. The law of safety in the water, swimming with a buddy, will not be violated if the canoeist stays with his craft.

The canoe is actually a more dependable buddy than an animate one would be, for another swimmer is liable to the same possibilities of fatigue, cramp, or injuries. The canoe is ever the same, empty or filled with water, undamaged or damaged, it floats, and can be depended upon to save a life if it is properly utilized. There is another factor that makes necessary the acquiring of skill in going overboard, and that is the desirability of knowing how to get back into the canoe. Even though going overboard for the purposes discussed above are forbidden, or not considered wise by the individual, going overboard will nevertheless be required in order to practice methods of getting back in, which may be necessary if the canoeist should find himself suddenly thrown out of the canoe upon meeting some new and unfamiliar paddling condition.

The following describes how a canoeist may go overboard from his canoe, take a swim, and board his canoe again, without at any time losing contact with it. Assuming that the water is fit to swim in, from a health point of view, the paddler should select a spot the depth of which can be determined visually if the water is clear, or by sounding with the paddle if the water is opaque. This is a matter of common sense. If the body of water is a familiar one, it presents no problem. If it is unfamiliar water, the above inspection is necessary to insure that there are no dangerous underwater obstructions. When it has been determined that the place is a fit one in which to swim, the paddler stows his paddle in

the bottom of the canoe. He then places one hand on each gunwale and rises to a standing position near midships, feet close together over the keel. He enters the water by employing a simple front vault as follows. As he springs lightly off the bottom with both feet, he allows his arms to momentarily support his weight as his legs and hips go over the side to enter the water. As the legs start downward into the water, the hand on the near gunwale is disengaged and enters the water laterally to commence a sculling motion to check the downward force of the body. The legs also upon entering the water are employed in kicking to reduce similarly the downward force. As the hand which started on the far gunwale follows across the canoe, it grasps the near gunwale and holds, to thus keep contact with the canoe. The canoeist is now in the water, holding onto the gunwale of the canoe with one hand. His purpose in going overboard has been to swim, so now he takes the end of the bowline and makes a loop through which he inserts his head, one arm and the corresponding shoulder. Thus assured that his "buddy" will remain with him, he proceeds to swim, towing the canoe behind him.

When his swim is finished, he is faced with the task of getting back into the canoe. This must be done in a manner to eliminate even the slightest possibility of capsizing. He must, for example, avoid the dangerous practice of attempting to board the canoe over the end. The first step is to replace the bowline into the canoe. He then moves to a position at,

or near, amidships. He grasps the near gunwale with both hands, shoulder width apart, arms fully extended. By employing a flutter kick, his legs are raised to the surface of the water. A strong scissors kick, or a series of vigorous flutter kicks, is now coordinated with a sharp pull of both arms. As the upper body shoots up over the canoe, one hand swifty engages the far gunwale, and with elbow high, pressure is exerted downward on it in order to stabilize the craft. The remainder of his body weight is now supported on the near gunwale since the canoeist's thigh, lateral aspect, is resting on it. The above steps place the canoeist in a position where he now has one hand on each gunwale. If the hand on the far gunwale is his right hand, the lateral aspect of his right thigh, just above the knee joint will be resting on the near gunwale. To complete the boarding operation, it is necessary only to do a quarter turn to sit into the bottom of the canoe. The legs are swung in over the gunwale next, and the canoeist takes his paddling position.

The above technique will be difficult for girls and women in view of their general arm strength deficiency. The following method is recommended for them. The girl selects a position where she can reach across the breadth of the canoe with one arm. This position should be as near to mid-ships as possible, but should allow the girl to firmly grasp the far gunwale with one hand. The other hand should grasp the near gunwale. Next the body and legs are raised to the

surface of the water by the employment of a vigorous flutter kick. When in the horizontal position a slow steady pull is exerted with the arm attached to the near gunwale. Coordinating, a rapid flutter kick with this pull shoots the body up over the canoe until the hand on the far gunwale is able to exert directly downward pressure, elbow held high. This position is the same as the one previously described for the standard technique. A quarter turn enables the girl to sit into the bottom of the canoe.

SELF RESCUE IN THE EVENT OF CAPSIZING

If the recommended practices regarding proper positions for paddling are adhered to, and if the factors pertaining to the center of gravity, metacentric axis, stability, and achieving the fine sense of personal balance in the craft have been intelligently considered, the incident of capsizing should be rare or non-existent. It is part of a well rounded training, however, for a canoeist to know how to skillfully follow procedures for self rescue, for this will almost entirely eliminate drowning danger. The methods following, however, have as a basic assumption the fact that the canoe has capsized. Though previously mentioned, it bears reiteration that if the canoeist sits on the seat, he will usually, upon losing balance, fall out of the canoe without capsizing it. Usually the canoe will be swept away in the breeze. In this case his only fortification lies in his swimming ability. This does not mean blind, frantic, untrained swimming effort to reach shore

as soon as possible, but a knowledge of floating, a couple of efficient styles of swimming, wisdom enough to conserve his strength, and to make progress slowly to shore.

Those paddlers who properly kneel in the canoe will rarely face the necessity of this swim. If conditions are adverse enough to precipitate the paddler into the water, the canoe also will be capsized, and thus swamped, will not be carried away by the wind, but will be near at hand as a desirable instrument of life saving. Though difficult to understand, it is nevertheless a fact that a large number of people do not realize that a canoe overturned or filled with water does not sink. As children, most people used blocks of wood or small sticks as make-believe boats putting to sea on the puddles following the rains that came. That was an early lesson in the physical law that objects with specific gravity less than that of water do not sink. Canoes like blocks of wood remain afloat even though filled with water. They too are made of wood, except for their canvas covering and the screws and tacks that hold them together. The same general behaviour can be expected from canoes made of metal provided they have buoyancy chambers which are intact.

The primary rule in self rescue is to stay with the craft. It has been indicated above that the canoe does not sink. After being thrown into the water the first thing to do upon returning to the surface is to gently grasp the canoe for support. This gives time to collect thoughts and plan the

most efficient method for getting out of an embarassing situation. For the present, it will be assumed that the canoeist is alone. He has grasped the bottom of the canoe as the first step in self rescue. The canoe usually will be overturned. When it does not overturn, it will rarely capsize, but instead right itself and drift away as described earlier in this section. Next the wet canoeist moves along the canoe to a position near midships. Reaching over the canoe he grasps the far gunwale and gently and slowly rolls the canoe toward him to an upright position. If the canoe is rather wide, the roll can be started by grasping the keel with one or both hands and then as the roll begins, one hand can be transferred to the gunwale as above. The canoe is filled with water, to be sure, but it is just as good a craft as ever, though a little slower because of its load of water. The canoeist may still continue his trip, return to his starting place, or make his way to the nearest shore. He must, however, apply care in getting in, for the lightness of the wood and its intrinsic tendency to climb to the surface make the canoe susceptible to easy rolling if undue pressure is exerted on one side or the other. With the canoe right side up, the canoeist places both hands about shoulder width apart, inside on the bottom of the canoe on the center line over the keel. It has been earlier stated that only swimmers should use canoes. Any swimmer can follow these instructions. The self-rescuer next raises his legs and trunk to a horizontal position near the

surface of the water. This position is maintained with a gentle flutter kick. Pressing directly downward with his hands and increasing the tempo of his flutter kick, he half swims and half pulls himself in over the side of the canoe, executes a one hundred and eighty degree roll to sit on the bottom over the center line of the craft. Next, the legs are swung into the canoe and extended forward, that is toward the end of the canoe, either bow or stern, depending upon which end is toward the shore to be reached. If there is a thwart at or near midships, getting in should be planned so that when the legs are swung into the canoe and extended toward the end, as described above, the thighs just above the knees can be braced under the thwart near each gunwale. The wider apart the knees, the better control the paddler has over the canoe in the event of the possible tendency for it to roll if there is a bit of sea running. As soon as the canoeist gets into the canoe as described above, his hands and forearms are extended sideward over the gunwales where they scull to aid in stability. The canoe will not roll if this is done.

To get underway for shore, handpaddling is begun immediately, either with both hands stroking together or alternately stroking, similar to handpaddling a surfboard. If the capsizing has occured far from shore, the canoeist may merely sit in the canoe and wait for another craft to come to his rescue providing he observes that his accident has been seen and that assistance is coming. If not, it is

better to start handpaddling, resting whenever necessary. This is particularly important if the water is cold for continued muscular activity in this event will help to lessen the seriousness of exposure. Eventually shore will be reached. Often the wind and waves will wash the canoe ashore. It is, therefore, wise to observe the effect they are having on the canoe and consider the advisability of taking advantage of them.

Upon approaching shore if it is observed that there is a gradually sloping beach or bottom, the canoe should be handpaddled into water about two feet in depth. The canoeist should then get out and stand up in the water which will be about knee depth. Next, the canoe is rolled on its side, topside facing the paddler who may then place one shoulder under the inside of the upper gunwale amidships to slowly lift the canoe entirely free of the water. When the lower gunwale is above the surface of the water, the canoe will be empty. With one hand and one knee, the canoeist may support the lower gunwale at the same time allowing the upper gunwale to slide off the shoulder. The canoe will then sit gently on the surface of the water, rightside up and empty. From his position in shallow water, the canoeist may step back into the canoe, man his paddle which during all this time should have been stowed at the bow under the forward thwart, unless employed in paddling the swamped canoe in lieu of the handpaddling in which case it will be now at hand for use.

Should the approach to shore reveal that there is deep water all the way up to the banking, a different method will have to be employed to empty the canoe. When as close as possible to the shore, the canoeist must get out of the canoe into the deep water. If he can stand on the bottom close to the banking, he will be able to lift slowly one end of the canoe and push it up on the banking sufficiently far to hold the canoe there until the next measure is taken. Upon his approach to shore he will have selected a section of shore offering a banking not too steep or high. In the event he cannot touch bottom near shore, he may submerge the offshore end of the canoe thus causing the nearshore end to rise out of the water. With a good leg kick and one arm stroking, he will be able to project the raised end up onto the banking. After achieving success with either of the above methods, he then must climb onto the banking himself. The canoe is now rightside up, one end on the banking and the other in the water. The next step is to grasp the end on shore and roll the canoe bottom side up. It can then be dragged slowly farther up onto the banking until the offshore end is also out of the water. The canoe is now entirely landborne. The procedure from here on depends upon the plans of the canoeist. If he intends to continue his cruise, he merely rolls the canoe topside up and launches it as described in chapter three, and proceeds on his way. It is well to mention that paddles should be tossed up on shore before the above steps are taken, other-

wise they might be broken or damaged while the canoe is being drawn up onto the banking.

If the approach is made to a dock or a low pier rather than as described above, the canoeist should come alongside and get out of his canoe and up onto the dock. From his new position, he can reach over the edge of the dock, grasp one end of the canoe and lifting slowly haul it up onto the dock about three feet. Then he must roll the canoe bottom side up and continue to draw it up on to the dock until the canoe upon reaching a balanced position is entirely out of the water. What he does beyond this point will depend upon his own particular plan.

SELF RESCUE FOR TWO OR MORE PERSONS

Self rescue for two or more persons involves a procedure essentially the same as for one. In some cases it will be desirable for the most highly trained person present to quietly assume command in the emergency. He should direct the others to stay with the canoe, to hold onto it for temporary support. It may be advisable for him to enlist their properly directed efforts to roll the canoe to the upright position if it is too large and wide for him to manage easily alone. He can then stabilize the canoe by holding it at one end while the others, one at a time, board it and take their positions as described in the previous section. Positions should be evenly distributed fore and aft. When the leader is aboard, his first concern is to see that all persons are sitting squarely over

the keel or centerline, with their hands and arms extended sideward in the water, sculling to aid stability. The canoe may roll over easily if errors are not quickly checked. If no rescue craft is approaching and hand paddling to shore is therefore necessary, it is carried out as described for one person, except that the stroke set by the foremost person is followed by those astern of him, just as the members of a crew keep in stroke on top of the water with paddles or oars. Upon reaching shore, emptying may be accomplished as described for one man, except that added hands if properly directed will make the work lighter.

Self rescue for more than one person discussed in the previous section assumed that all hands knew properly how to swim, and reacted reasonably well to the experience of capsizing. None, therefore, required more assistance than intelligent direction. In the event the canoeist discovers at the time of the accident that his companion cannot swim after all, or that the suddenness of the new situation has thrown him into a panic of uselessness, or that the situation in some other way demands aid for him, definite steps will have to be taken to prevent a drowning. The canoeist, therefore, must immediately take a dual role, self rescuer, and rescuer of the other. He gets one hand on the victim and the other hand on the canoe as soon as possible. This provides the necessary immediate support for both persons. Then the rescuer moves to the other side of the canoe without losing

contact with the victim. Once in a position at or near midships, opposite his companion, he should grasp both wrists of his companion across the bottom of the overturned canoe. If help is on the way, this is all that is necessary until the help arrives and takes command. If help is not coming, the helpless person may possibly be talked into a state of reasonable calmness now that he feels secure with his arms over the bottom of the canoe. In this case the remaining steps would be as already described. If, however, he is definitely helpless, it will be necessary to put him into the canoe. This can be done while the canoe is being rolled to the upright position. At present the rescuer is holding the victim's arms over the bottom of the canoe by means of his grips on corresponding wrists; that is the rescuer's right hand holds the victim's left wrist and his left hand similarly holds the right wrist. He now releases his hold on the victim's right wrist and immediately changes hands on the victim's left wrist. This frees the rescuer's right hand which is immediately extended across the canoe to grasp the far gunwale to roll the canoe slowly toward him to the upright position. It will be necessary to slack off somewhat on the victim's arm as the canoe starts to roll over. Just as it completes its roll to the upright position, the rescuer releases his grip on the victim's left wrist and transfers his hand quickly to the victim's chin and actually throws him onto his back into the now upright canoe. The rescuer then quickly boards the

canoe placing himself close behind the victim and somewhat under him since only their heads need be above water. Whether conscious or unconscious, as long as the victim is breathing without undue difficulty, the rescuer proceeds to handpaddle the canoe and its burden ashore. If the victim's natural breathing has ceased, artificial respiration must begin without delay. The standard technique of prone pressure artificial respiration will not be possible since the victim is in the supine position. The victim has, however, sufficient elevation to his head and shoulders so that the former is clear of the water, and resting on the rescuer's chest. An improvised method of artificial respiration may, therefore, be employed. Regular rhythmic pressure on the lower ribs or against the abdominal wall, lifting the abdominal contents up against the diaphragm muscle will produce a regular rhythmic exchange of air in the lungs. Pressure should be applied every four or five seconds. If help is not observed to be coming, hand paddling may be alternated with the pressures, and the canoe thus headed toward shore where medical assistance may be obtainable. In many cases normal breathing will resume very shortly since in a situation such as described above the victim could not have been asphyxiated for more than a minute, before the commencement of artificial respiration. In fact in cases like this where immediate rescue is effected, a temporary spasm of the epiglottis will sometimes wear off and natural breathing resume even if no artificial respiration is given.

This thought should never be entertained as a solution to the problem, however, for in all cases, artificial respiration should be employed until the victim again breathes for himself. It is well to mention here that every aquatic inclined person should be skilled at artificial respiration. It can be learned free of charge in a Red Cross First Aid or Water Safety course.

A word of caution is here indicated. In the event it has been necessary to revive a person by artificial respiration, it should be remembered that his whole system has undergone a severe strain. Help should be employed to transport him to a hospital and he should be kept absolutely quiet and warm in transit. Blankets and even external heat are advisable.

None of the above described procedures are difficult. The first attempt to employ them will be successful, but it is well to practice them a few times to develop confidence and familiarity with situations of this nature.

EMPTYING A SWAMPED CANOE

The basic self rescue methods discussed in the previous section are sufficient to assure preservation, but there are other ways to face the same situation. They involve emptying the canoe unaided in deep water. The simplest method is to lie low in the canoe with only the face above water, allowing the water rather than the canoe to support the body's weight. A vigorous flutter kick will slowly splash the water out of the canoe, allowing the freeboard to gradually increase till

sitting up is possible without submerging the gunwales. The water can still be slowly but surely emptied with cupped hands or any available object such as a hat or shoe.

THE SHAKE OUT

The most advanced method of self rescue is to quickly empty the canoe unaided, board it and continue underway as though nothing serious had happened. This is accomplished by a technique known as the "shakeout".

If the capsized canoe is bottom side up, it should be rolled gently to the upright position. The canoeist then moves along the canoe to one end. Placing himself in position at the end, facing the length of the canoe, he forces one end down into the water enough so that the end is completely but shallowly under water. The other end will, therefore, rise out of the water. A vigorous thrust forward, arm's length, will cause about one third to one half of the water to come out over the submerged end. The grip on the end must be maintained, and the end raised abruptly at the moment the water ceases to run out over the end, otherwise much of the water will be taken in again. If the canoe is large and heavy, it may be necessary to stroke with one arm and the legs in order to accomplish the forward thrust. One or two more such thrusts may be used, if necessary. The canoe being now only half filled with water has several inches of freeboard. The end should be held firmly until the surge of water from end to end, created by the original thrust has quieted. Then

the canoeist changes his position to amidships where he grasps the near gunwale with both hands placed shoulder width apart, with thumb opposing grips. The canoeist is now in position to "shake out" the remainder of the water. He lowers the near gunwale close to the water's edge, leaving about an inch of freeboard. A few thrusts directly forward from the shoulders will start the water rolling from side to side in the canoe. The canoeist must coordinate his leg kicks with his thrusts so that he is not hanging onto the canoe and not pulling the near gunwale under water. The scissors kick is most effective unless he happens to have an unusually strong breast stroke kick. As the water surges from side to side, the canoeist must lower the near gunwale to the water's edge and thrust. This must be timed perfectly and rhythmically with the roll of the water toward the canoeist. This depression and thrust allows the oncoming water to roll out over the near gunwale rather than hitting the freeboard and bouncing back into the canoe. The far gunwale should always be higher than the near gunwale, and the canoeist should constantly watch the surging water to maintain perfect timing. Rhythmic breathing will be necessary. It must be timed so that exhalation takes place as the water clears the near gunwale into the canoeist's face. No great effort is required in this operation. Timing is the key factor. Skilled persons can do nearly as well with one hand as with two, providing the canoe is not too large. This indicates that rhythm of movement rather than strength is

essential. When the water is nearly all out, the final thrusts will need to be more vigorous to get the last bit of water out, especially if the canoe has considerable tumblehome and closed gunwales.

With a small light weight canoe, the canoeist may prefer to eliminate the end thrust and start immediately at the amidships position. In this case, he achieves two or three inches of initial freeboard by placing one hand or the crook of one arm against the bilge of the canoe on the outside. The other hand is on the gunwale. With the aid of a strong leg kick he lifts with the hand on the outside raising the far gunwale high above water, and then immediately lifts the near gunwale with the other hand to effectively eliminate a portion of the canoe's load of water. The canoe should now have the desired freeboard, and the shakeout may begin as described above.

When the canoe has been emptied, boarding it is done as described earlier in this chapter. Floating paddles and other gear flotsamed at the time of the accident can then be picked up. Handpaddling can be resorted to in the event all paddles are adrift.

The shakeout is not a necessary part of a canoeist's fund of knowledge and skills. Basic safety and self rescue as described in earlier sections are adequate. When capsizing in very cold water, however, the ability to do the shakeout may help avoid serious illness by eliminating long exposure.

CHAPTER SEVEN

RESCUE OF OTHERS

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RESCUE OF OTHERS

It is hardly proper to classify a man as a skilled canoeist if he is incapable of rendering aid to persons in distress in, or on, the water. Practice in rescue methods should be part of every canoeist's training. It is a sad commentary to point out that people drown each year while neophyte canoeists nearby do nothing to help. It is not that they are callous and indifferent in the face of impending tragedy to others. It is rather that inexperience, ignorance, and a lethargic attitude toward learning opportunities keep them in a state of not knowing what to do. This is unfortunate especially in view of the fact that nearly all of the rescue techniques are so simple that merely reading this chapter would change many of these helpless persons into samaritans of the waterways, capable of saving lives. Practice of course is needed to refine skill, develop confidence, and eliminate fear.

A Watchful Eye And A Helpful Suggestion

The trained canoeist is alert to activities in and on the water, in his vicinity. At a glance he evaluates the relative skill and experience of the canoeists on the water. He is quick to observe that a swimmer has swum too far from shore.

Often an inexperienced canoeist, paddling at the stern position will find himself at the mercy of the wind, and unable to control his canoe. A suggestion, if politely given, will usually be welcomed. Upon the advice of the trained canoeist, the novice will move to a position, kneeling, nearer midships and find that he will be better able to control his craft. A capsizing may be thus avoided.

Occasionally two inexperienced paddlers find extreme difficulty steering their canoe because the bow paddler is considerably heavier than the stern paddler. If they invite the assistance of the experienced canoeist he should come alongside, hold the gunwales of both canoes tightly together, and direct the changing of places as described in chapter four. With the heavier man astern the canoe will steer better.

The experienced canoeist will very likely be rebuffed if he offers assistance or advice, except in cases where it very obviously is needed to get someone out of a difficult situation. For example, a warning to all persons sitting on seats that they should kneel on the bottom for safety would be very unpopularly received. When, however, two paddlers sitting on the seats are caught in rough water and realize their precarious situation, they will accept a suggestion that they kneel in the bottom for greater stability, greater power application in their strokes, and consequently better control of their craft. The advice should be offered under these circumstances.

The experienced canoeist will keep an eye on the swimmer too far off shore, and on the "accidents going somewhere to happen in canoes". He will be on hand to avert a tragedy if trouble develops.

Rescue Of A Tired Swimmer

The tired swimmer should be approached carefully, but quickly. When the bow of the canoe is about six feet away it should be pulled around abruptly so that the broad side of the canoe is presented to the tired swimmer. This is to prevent the tired swimmer, who might suddenly become panic stricken, from prematurely contacting the canoe at the bow out of reach of the paddler. With draw strokes, or by sculling, the canoe may be moved closer sideways, if necessary, so that the paddler can reach the swimmer with his extended paddle blade. When the swimmer has a firm hold, the rescuer hauls in on the paddle until the canoe is alongside the swimmer. He then grasps one or both wrists of the victim and holds them firmly to the gunwale with one hand while he stows his paddle out of the way with his other hand. The tired swimmer is now in a position of safety. The paddler is also in a position of complete control over the situation. In the event the swimmer becomes panic-stricken and attempts to climb in before his rescuer is ready for him, he can be restrained by firm hand pressure on one of his shoulders.

The next step will depend upon how tired the swimmer really is and possibly by how far off shore he is. Some

persons, after the brief rest afforded by the support of the canoe, will wish to swim back to shore rather than be taken ashore in the canoe. In this case the canoeist should paddle along, close by, until the swimmer has safely reached shore or shallow water. Often, however, taking the tired swimmer aboard is the procedure. To do this safely the canoeist sits down in the bottom of the canoe near midships. He places his free hand on the gunwale opposite the gunwale on which the swimmers arms are being held. The swimmer is then instructed to climb in. Pressure on the opposite gunwale permits climbing of any sort. No special technique is required. The canoeist can help with his free hand if necessary. Once aboard the swimmer takes a sitting position on the bottom near midships.

If the rescuing craft is manned by two paddlers, the work described above is normally done by the bowman who moves to a position nearer midships, facing aft. The sternman keeps his position and controls the canoe with his paddle.

RESCUE OF HELPLESS VICTIM

A helpless victim may be still conscious but exhausted beyond the point where he can help himself. He may be unconscious but still breathing, as for example in the case where a buoyant person has received a head injury or is in the first stage of drowning. He may be unconscious and also asphyxiated. Many obese persons are so buoyant that they remain at the surface even after drowning.

The approach to all of the above is made rapidly, seconds count if the life is to be saved. The paddler must handle his canoe precisely so that he may quickly come along side, close aboard. As the bow shoots by the victim, the paddler stows his paddle in the bow with one quick sweep of one hand and simultaneously darts the other hand toward the victim, to get a quick firm hold. If the hands or arms are at the surface, the contact is made with one of them; if not, clothing, the hair, or any exposed part will do. Rapidly but smoothly and carefully, both of the victim's arms are brought up over the near gunwale and held there. Then the canoeist stands in his canoe, grasps the victim's wrists with his opposing hands and lifts him out of the water sufficiently to allow his trunk to jack-knife into the canoe. The victim's legs can then be rolled or slid into the canoe. Some persons may prefer to remain kneeling during the lift in which case it will be necessary to lift by the arm pits.

If the victim is still breathing, he should be laid out in the bottom of the canoe and covered with a blanket if one is available. If he is not breathing or breathing inadequately, he must be laid out quickly in the prone position making sure that his cheek is supported on his own hand or wrist to keep mouth and nostrils clear of any water that may have been shipped or hauled in with the victim. Artificial respiration must be started immediately. No other consideration is so important. If it is not begun, the victim will die. If there

is a second paddler or passenger in the canoe, he should paddle the canoe toward shore where medical help will be obtainable, otherwise all things will be disregarded except giving artificial respiration. If, however, the rescuer observes that no help is coming to tow him slowly to shore, he may without decreasing the effectiveness of his artificial respiration alternate hand paddling strokes with it, thus heading the canoe towards shore where medical help may be summoned. If the above is adhered to strictly, it is very probable that the victim will resume breathing before shore is reached. If reaching shore is taken as the chief concern, to the neglect of artificial respiration or the effectual administration of it, it is quite probable that no number of doctors will be able to help.

In the event the victim is heavy, he can be hauled in over the side by two canoeists, but a single canoeist may not be able to accomplish this with the methods described above. It may be necessary in such a case to cross the victim's wrists over the end of the canoe and lash them with a painter, and proceed to tow the victim as rapidly as possible toward shore.

RESCUE OF A SUBMERGED VICTIM

It is possible that a very tired swimmer may pass through the stages leading to his asphyxiation and submersion while thecanoeist is making his approach, especially if he has been sighted from afar or not seen soon enough. If he does submerge

while the approach is being made, the canoeist should keep his eyes fixed on the spot where the victim went down. Without taking his eyes off this spot, he will make a loop in the end of the painter and secure it to his ankle. This will permit him to go overboard after the victim without the danger of having his canoe blown away by the wind or carried away by tide or current. The ankle loop made by inserting a bite of the standing part of the line through the eye in the extreme end. This is slipped over the foot and drawn fast around the ankle.

Upon reaching the spot where the victim submerged, the paddler quickly stows his paddle and dives over the side. He should be able to reach to a depth of fifteen or sixteen feet before being checked by the line. In most cases, this will be sufficient to enable him to make quick contact with the victim. He should grasp the victim by the chin or hair with one hand, and head for the surface quickly, stroking with the other arm, and employing a scissor or an inverted scissors kick. Because the painter is attached to the ankle, the canoe will be close at hand. The rescuer tows the victim alongside approximately at amidships and lifts both of the victim's arms over the gunwale. This supports the victim with his face out of the water. The rescuer then disengages the painter from his ankle and places one of his hands on the victim's arm nearest him and boards the canoe as described in chapter six.

Once in the canoe, he hauls the victim into the canoe as described in a previous section and proceeds with artificial respiration.

It should be mentioned here that prior to securing the painter to the ankle, care must be observed to assure that the whole length is free and not fouled around spare paddles, other gear, or led under a thwart. In addition, when ready to go overboard, the paddler in stowing his paddle in the bow should be sure that the shaft and grip which will usually angle up from the bow to rest on the bow thwart are over near the gunwale on the side opposite the side over which the dive is to be made. This is to prevent a last minute fouling of the painter with the paddle so quickly stowed.

The rescue of a submerged victim by two canoeists allows more flexibility of operation, and less restriction of effort as is the case when the rescue is done by one canoeist as described above. Upon approaching the spot where the victim submerged, the bowman stows his paddle preparatory to diving. If he is skilled at diving, the jack-knife dive is recommended because it will enable him to go straight down, fast and deep. The stern paddler keeps the canoe in position nearby, watching the bowman's under water rescue efforts if the water is clear enough for visibility. When the victim is brought to the surface, the stern paddler moves the canoe close so that the victim's arms may be placed over the gunwale near midships. He then stows his paddle and hauls the victim in over the side

as described for a one man rescue. Meanwhile the bowman who has brought the victim up from the depths, holds the bow or stern or opposite gunwale firmly to contribute stability to the craft while the victim is being hauled in. Once the victim is in artificial respiration is begun without delay if the victim's condition so indicates. The rescuer still in the water then boards the canoe in the correct manner and commences to paddle the canoe toward shore where medical will be obtainable. The sternman who hauled the victim in continues uninterruptedly with artificial respiration.

In the event the victim is too heavy for one man to haul in over the side, the sternman holds him securely to the side while the bowman, who brought him up to the surface, quickly boards the canoe. The combined strength of the two rescuers will be sufficient to lift the victim into the canoe. One should then immediately start artificial respiration and the other should man a paddle and get the canoe started toward shore.

CANOE OVER CANOE RESCUE

When a canoe is observed to capsize, the first consideration is for the upset canoeists. Rescue of their canoe and equipment is secondary, though often the operation may be carried on as a whole. The first recommendation is that the trained canoeist call to the distressed directing them to remain with their canoe and to hold onto it for support. This is important because the history of canoeing accidents indicates

the prevalence of the error of leaving the canoe to attempt the swim to shore. In the event the instructions are not followed it will be necessary to care for the victims as described in the previous sections; standing by ready to aid if they persist on swimming to shore, hauling them aboard if they tire. It shall be assumed here that they have obeyed instructions and are clinging to the capsized craft awaiting rescue.

The approach to the capsized craft may be made swiftly, coming alongside parallel to it. Either side will be satisfactory unless there is a strong wind in which case the leeward side is best. The windward side in bad weather will promote difficulty. A clinging victim may be jammed between the two canoes. The rescuing craft may be blown down wind forcibly against the capsized canoe inhibiting efficient rescue procedures, and possibly causing another upset.

The victims, assuming there are two, must be cared for first. They should be directed to procede hand over hand along the capsized canoe to the ends of the rescuing canoe so that one will be holding onto each end of it. When the rescuer is satisfied by observation and questioning that they are safe and will patiently remain in their places until given further instruction, he proceeds to rescue the canoe. Since his canoe is alongside the overturned canoe, he grasps the keel of the latter with one hand and slowly rolls it toward him. When the gunwale is in reach of his other hand the

roll is completed gently with the craft in the right side up position. Paddles, fishing poles, or any other equipment, lying in the bottom, or floating in the craft, must be carefully taken aboard the rescuing canoe and stowed in its bottom. This is a precautionary measure for otherwise such equipment might foul up the following steps.

Next, the end of the swamped craft, either end, is slowly raised. Contact is made with it by proceeding hand over hand along the near gunwale. This is an easy measure since the rescuing canoe being afloat on top of the water will gently make the necessary way astern or ahead until the end of the capsized craft is at hand at the paddler's position near amidships. The raised end is drawn up across the rescuer's canoe until it is nearly even with the far gunwale. The canoe is then turned bottom side up and slid across the gunwales of the rescuer's canoe at right angles till it reaches a balanced position. It is then rolled upright and slid back, empty, on top of the water to leeward.

All that remains is to get its former occupants back into it. To do this both canoes are placed side by side with the gunwale of the rescued craft caught and held firmly by hand under the outwale of the rescuer's craft or pressed firmly against the same. The wet, but rescured pair, one at a time, proceed hand over hand to the far gunwale of their now empty craft, and climb in. Any method of climbing is permissible since capsizing is prevented by the rescuer's grip which

secures the gunwale of their canoe to the gunwale of his. Once they are aboard and in position, their paddles and gear are handed to them, and they can be on their way, a little wiser for their experience.

Canoe over Canoe Rescue when Both Canoes Are Capsized....

It is reasonable that conditions causing one canoe to capsize might also cause its companion canoe to capsize. In this case, the usual canoe over canoe rescue cannot be employed, for the latter requires one canoe to be empty. It is assumed, of course, that the two canoes under discussion are not in the vicinity of other canoes that might be available for a rescue.

The fact that both canoes are capsized is not as serious a plight as might at first be assumed. The new problem is to get one emptied. After that, the other can be emptied as described in the foregoing section. When two canoes capsize, there will be a minimum of two persons at the scene. This is obvious; one person for each canoe. Both will be in the water. They will quickly decide which canoe is to be emptied first. If a difference in size and weight exists, the lighter canoe will be the one selected. It will then be rolled slowly to the upright position and carefully towed to the side of the other canoe near midships. The latter will be bottom up. Paddles and other gear will be taken out of the former and allowed to drift or placed under the other canoe. The two men will station themselves, one on each side of the bottom up canoe near midships. The one stationed on the side where

the craft to be emptied is located will place one hand on the bottom of the canoe which is bottom side up and the other hand under the end of the craft to be emptied. He will slowly raise this end and slide it up on the other canoe. When the man on the other side can reach this end, the two of them gently roll the canoe bottom side up and slide it across the bottom canoe at right angles until it is at a balanced position. The top canoe should then be dragged a foot or two away from midships in the direction of the two men. It will then be in a position to be turned over.

The turn is effected as follows: as the men face each other, each places one hand on the bottom canoe and the other under the gunwale of the top canoe. Together they raise the gunwale and roll the canoe right side up. Then it is slid off the bottom canoe onto the water afloat and empty. One or both men then board it empty the other canoe in the regular canoe over canoe manner.

The above method will work regardless of the amount of air that may or may not be locked under the bottom canoe. Shifting the top canoe a little off midships before the roll is to permit it to bring its weight to bear on the midships portion of the canoe when the roll is being effected.

CHAPTER EIGHT

RECREATIONAL CANOEING

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RECREATIONAL CANOEING

In view of the fact that practically all canoeing is recreational in nature, now that the canoe has ceased to be essential to transportation throughout most of the country, it should be stated that in this chapter recreational canoeing means: stunts, novelty events, formation paddling, and such, as differentiated from straight paddling.

There is an unfortunate but natural tendency for many persons to be interested in one form or another of recreational canoeing before they have developed an elementary skill with the paddle. This is not a sound sequence in the development of skill, for soon they begin to feel satisfied with their canoeing ability based upon the acquisition of skill in stunts, losing sight of the fact that classification as a skilled canoeist is more properly based upon paddling skill.

When properly balanced, however, with sound training in paddling skill, personal safety, and rescue methods, recreational activities can be very worthwhile. They stimulate interest in canoeing and enhance the development of the individual through the practice and application of his basic learning. Some of these activities are actually tests of skills learned and promote optimal progress along the road to skilled canoe handling, because to do them well the canoeist

must extend himself more than he might normally be motivated to do.

It does not seem necessary to classify the recreational activities presented here, for, in their application to any program, variety in selection will increase their appeal both to participants and to spectators. They are thereforeset down largely as they come to the mind of the author.

American Canoe Association Standard Events

The events in this section are those which have through the years often been included in American Canoe Association camp and regatta programs. Detailed rules for their conduction are given in a small publication entitled - American Canoe Association Racing Rules And Regulations. Considerable flexibility is used in their presentation here.

TAIL END RACE

As the name indicates the tail end or stern of the craft leads in this race. The crew is one man. He kneels on the bottom between the stern thwart and the stern end of the canoe facing in the direction of the stern, with his back to the rest of the craft most of which is riding high out of the water. In some canoes, the stern thwart may be too close to the stern deck to allow the stern end to be used. In this case, the paddler may kneel forward in the bow. Both ends are the same shape, so the same result will be achieved. In either case, however, he must not kneel farther than four feet from the extreme end. The aim is to handicap the paddler

as much as possible by having most of the canoe out of the water and at the mercy of the wind.

The race is usually one hundred and fifty yards in length and downwind when possible. The contestants line up on the starting line, facing the wind, with their backs toward the finish line. On the starting signal, the canoes are paddled around to head for the finish line. Backward strokes are not permitted, otherwise the paddler may paddle as he pleases. Paddling a straight course is difficult, thereforebumping is not considered fouling. The first to reach the finish line wins. To increase the degree of difficulty, the finish line may be laid out with two buoys at a specified distance apart, for example a hundred yards, and finishing between these two buoys required.

RESCUE RACE

This race has as a prerequisite the ability of one member of each team to do a shakeout rather well. Each team consists of two canoes, each manned by one man with single blade. On the starting signal one canoe of each team, as prearranged, starts off the line at top speed toward the finish line, two hundred yards away. The other canoe of each team stands fast. When the former are about half way to the finish line, a second signal is given. At this time the canoeists underway capsize their canoes, turn them completely over, and begin the shakeout. On the same signal the canoes on the starting line get underway and head for their partners. Upon their

arrival at least two thirds of the water must be emptied from the canoes or they will stand by until it is. Then the men in the water quickly board the rescuing craft, tie the painters of their canoes to the rescuing canoes, putting them in tow. From this point on it is a tandem race. The first team to reach the finish line wins.

When the canoes to be shaken out are large or have considerable tumble home, or closed gunwales, it may be advisible to double the length of the course to provide time for the shake-out to be accomplished.

HURRY-SCURRY RACE

There are three elements to this race; a fifty yard run, a fifty yard swim, and a hundred yard paddle, single blade. The canoes are anchored fifty yards off shore or the take-off place, on a line parallel to the latter. The contestants start on a line fifty yards back on shore, run on land, dive or jump into the water and swim, each to his designated canoe, climb aboard, haul in the anchors, or cast off if the canoes are at moorings, and paddle for the finish line a hundred yards away.

In this event distances may have to be modified. In some cases, the run on shore may have to be shortened or practically eliminated, the swimming distance lengthened or shortened. In many cases, it may be desired to lengthen the paddling distance.

GUNWALE RACE

The distance recommended is one hundred yards. The race may be in single or tandem, with single paddles or double paddles. The contestants stand on the gunwales with their feet free of thwarts, seats, decks, or any other fixtures. The crews are lined up on the starting line as in any ordinary race and must paddle a reasonably straight course so as not to foul each other. Paddlers must remain on the gunwales throughout the race.

This race may be modified for tandem crews by requiring that all paddlers be in the kneeling position on both knees on the starting line. On the starting signal the paddlers mount the gunwales without touching hands or paddles to any part of the craft. This increases the degree of difficulty. Considerable preliminary practice will be necessary on the part of the contestants if this modification is adopted, or capsizings, or falling overboard, will be common occurences. To accomplish this method of gunwale mounting, the sternman must constantly watch and work in unison with the bowman. On the starting signal both men rise to a standing position at the same time, paddles balanced in both hands. The sternman calls "Ready, one". On the command "one", the bowman places his right foot quickly on the starboard gunwale. At the same time the sternman places his left foot on the port gunwale. Then follows the command "Ready, two". On this command the bowman hops and places his left foot on the port gunwale. At

the same time the sternman similarly gets his right foot up on the starboard gunwale. They are both now in correct positions on the gunwales ready to commence paddling for the finish line. The sternman immediately gives the command "go". It is important that they thus start paddling together and keep in stroke throughout the race. For this difficult mounting, paddlers teamed together must be of approximately of the same weight.

HAND PADDLE RACE

Normally the crew of each canoe is one or two men, but with larger canoes, larger crews could be entered. They kneel or sit in the bottom and propel the canoe ahead with their hands only. There are starting and finishing lines as in other races. Unlike racing with paddles, greater speed can be achieved if both men hand paddle on the same side but, of course in unison. This allows them to have a list on the craft which enables a deeper stroke of the arm and consequently more power and speed. When necessary they shift to the other side on the command of one member of the crew as prearranged. This is done quickly by sliding on the bottom from one side of the canoe to the other. Unless weather conditions are adverse, reasonable precise control of the canoe is possible in hand paddling. This fact can be emphasized to the contestants by requiring that they paddle in their own water and disqualifying them if they foul another crew.

OVERBOARD RACE (OUT AND IN RACE)

The crew for each canoe in the overboard race is one or two persons. Two will make the better race. The crews line up on the starting line. On the first signal they start paddling as in a straight race. When they are approximately half way to the finish line, a second signal is given at which time all go overboard immediately, but without upsetting the canoe. They board the canoe as quickly as possible and commence paddling to the finish line. The first there wins.

It may add interest to lengthen the 150 yards recommended course slightly, and have several overboard signals given.

Methods of going overboard and boarding described in Chapter six may be employed rapidly in this event. There is, however, a method which gives greater speed. It is done from the high kneeling or racing position described in Chapter nine. For the following description of this technique, it will be assumed that the bowman is paddling on the left, and the sternman on the right. Both are in the high kneeling position and located each nearer amidships than is customary for conventional tandem paddling. When the overboard signal is given, the bowman, with one quick thrust, stows his paddle, with the blade on the bottom of the canoe, in or close to the bow, and the shaft, near its upper end, resting on the thwart nearest his forward leg, and close to the starboard gunwale. It should be repeated here that the bowman is paddling on the port side. At exactly the same time the sternman thrusts his

paddle into the same position, side by side with that of the bowman. Then the bowman grasps the port gunwale with his left hand about a foot forward of his left thigh. For this grasp he must supinate his hand so that his knuckles will be inboard, thumb pointing aft. He then does a forward roll into the water, at the same time swinging his right arm around toward the stern of the canoe. Hisright hand grasps the gunwale aft of his left hand about shoulder width distance. He then heaves himself over the side to land in his correct paddling position, grasps his paddle and commences paddling again. The sternman has during this time done the same things on his side in perfect timing with the bowman. Timing is essential or the craft will be capsized.

UPSET RACE

On the first signal, the contestants, one or two to a canoe, paddle off the starting line. When they are about half way to the finish line, a second signal is given, upon which all canoescapsize completely. The canoes are then emptied by the shakeout technique. When all the water except that which lies lower than the level of the ribs is out, the contestants board the canoes and continue their race for the finish line. Inspection of the amount of water remaining in the canoesis made, before final announcement of winners.

CANOE EMPTYING CONTEST

This is purely a contest of speed in accomplishing the shakeout. It may be conducted on a time basis, each contestant awaiting his turn, or perhaps better from the standpoint of time consumption, it might be conducted as follows: Each craft is manned by one contestant who is seated in the bottom and occupies a designated place on the water with no way on. When the signal is given, each contestant capsizes his craft, turning it completely over, empties it and climbs back in. The first to be again seated in the bottom wins, provided he does not have more than the allowed amount of water remaining in his canoe.

CANOE FILLING CONTEST

When more than two crews are entered in this event, it should be run on the elimination basis.

A crew consists of a paddler who sits on the bottom aft, and a pailman who stands on the bottom forward, not farther aft than six feet from the stem of the canoe. The pailman may not brace himself against thwarts or deck or other fixtures. He may not touch the other canoe with pail or any part of his person. His task is to fill the other canoe with water which he takes from the body of water which bears his craft. He fills his pail and empties it into the opponent's canoe. He may not bail his own canoe. The paddler confines his efforts solely to paddling. This task is sufficient for him since precise canoe handling becomes progressively more

difficult with the introduction of more and more water into the canoe. He cannot assist in any other way. The first canoe to have both gunwales pass below the surface of the water loses.

TUG-O'-WAR

This contest is usually for tandem crews, although it can be staged for fours if large canoes are available. Bridles are rigged on both canoes, and the two secured together by at least four feet of line. The exact center of this connecting line should be marked after all is secure. The canoes should be of the same size and design. There should be two finish lines, one for each canoe, about fifteen or twenty feet ahead of its stem. The starting signal is given when the marked center of the connecting line is equidistant from the two finish lines. The crew to win is the one which, dragging the other canoe, manages to reach the finish line with the stem of its own canoe, or whose stem is nearest the finish line at the expiration of a two or three minute time allotment.

When conducting this event in an indoor pool, it may be desired to have the two competing craft lined up side by side, heading for the same finish line, the end of the pool. The connecting line is lengthened and run through two single blocks located at the other end of the pool. The blocks should be about fifteen feet apart. The halfway mark between the two blocks should be determined accurately and clearly indicated on the deck of the pool. The exact center of the connecting line should also be clearly marked.

The crew begin to paddle slowly, just enough to take a strain on the line. The starter gives the signal to begin the race when the marked spot on the line exactly covers the marked spot on the deck of the pool.

The crew wins whose canoe first touches the end of the pool, or which upon the expiration of the time set for the race, has the marked spot on the connecting line pulled over on its side of the marked spot on the deck. Actually the canoe ahead will be the winner, but the latter method of determining the winner will be infallibly accurate, in cases of a close contest.

TILTING

The crew for tilting consists of two, a paddler and a poleman. The paddler sits on the bottom of the canoe, quite far aft. His function is to handle the canoe with the paddle as precisely as possible to give his poleman every advantage possible. The poleman stands about four feet from the extreme bow of the canoe, either on the gunwales, or on a platform attached to the canoe at gunwale level, with no overhang. Ordinarily it is not necessary to go to the trouble of attaching platforms. Just as good a contest can be staged with the polemen standing on the gunwales.

The pole whould be between seven and nine feet long and have a ball on its end. The ball should be at least six inches in diameter. The tilting pole is usually assembled by attaching a plumber's rubber suction pipe cleaner to the

end of the pole and inserting the ball firmly in the suction side. Tape may be used to assure that the ball will not come out during the contest. White adhesive tape is probably better than black tape because it is smoother and less likely to scratch the skin.

When the contest is started the opposing crews approach each other slowly, head on. It is the paddlers' task to see that this position is achieved promptly and skillfully. The polemen jab or push at each other with the poles. All strikes must be above the waist. Only the ball may strike the opponent. The pole part may not be used, thereforeswinging at the opponent is considered a foul. Fouls are also scored against the crew whose poleman touches any part of his own canoe with his pole or any part of his body above his knees, or pushes or pulls the opponents' canoe with his pole, or interferes in any way with the paddler. The paddler likewise may not touch either of the opponents or their canoe with his paddle or hands, nor touch his own partner with his paddle or hand, nor throw water into the opponents' canoe, nor bail his own.

The polemen continue to jab at each other endeavoring to upset each other, but whenever the canoes' bows overlap each other sufficiently to cause the poleman to be directly abeam of each other the referee shall call a halt and the canoes will be brought into correct position again. This is strictly a contest to see which poleman can fairly knock the other off the gunwales into the water or cause him to make

six fouls by touching his canoe for support or stepping or falling back into it.

The winning crew is the one which remains afloat properly after the opponents have had either six fouls declared against them, or either or both of them have gone overboard, or their canoe has swamped.

The referee may award the contest to either crew, if fouls are deliberately and unsportingly committed.

OTHER EVENTS

To whom credit should be given for the remaining activities described, it is not known. Though the author is aware of where he first saw or heard about some of them, the origination is not known. Many of them will have a place in a well rounded canoeing program.

SHINGLE RACE

This race is the same, essentially, as the hand paddling race except that shingles or similar objects are held in the hand. Smooth light boards the size of shingles will be better than real shingles for they are less likely to have splinters. Old discarded paddle tennis racquets would do nicely. A very short course is desirable for this race.

BROOM RACE

The broom race may be staged as a regular straight paddling race, except for the use of brooms rather than paddles. This event will probably be most effective if staged for tandem or fours crews. A course of about a hundred yards is recommended.

STANDING RACE

This will be a test of good paddling ability and balance. The race may be for single or tandem crews. In this contest the most skilled paddlers will win. The course may be lengthened to as much as a quarter of a mile. The standing position should be assumed with the feet about fifteen to eighteen inches apart, or, for fairly well grown up boys, as much as two feet apart, fore and aft rather than side by side athwart-ships. Paddles as long or longer than the height of the contestants should be used. In tandem crews the paddlers locate themselves close together amidships and yet not so close as to interfere with each others' stroking. These positions should also be planned to allow good trim to the craft, that is so that it will not be down at bow or stern or have a list. Good canoe handling should be expected on the starting line and underway. A crew that gets out of its own water seriously enough to interfere with another crew's chances to win or place should be disqualified.

KANGAROO RACE

The kangaroo race is sometimes referred to as "bobbing". It is particularly popular with novice canoeists who still hold the belief that a canoe is a cranky, unpredictable craft. Standing on the gunwales to them seems the acme of skill in canoeing, because it represents keeping their balance while in the highest possible position. Actually it contributes very little to real skill in canoeing, but it is grand for entertainment of the spectators.

The position is standing on the gunwales about four feet forward of the extreme stern end of the canoe. The canoe is made to bounce along on the surface of the water, by alternate bending and straightening of the knees of the canoeist. If the contestants are allowed paddles, which may be desirable, if there is a breeze, to control the craft on the starting line, once the starting signal is given, the paddles can no longer be used in the water, but must be held in both hands in the horizontal plane.

CANOE OVER CANOE RESCUE RACE

Each team consists of two canoes, each with a single paddler. On the first signal one canoe of each team starts rapidly off the line. When these canoes are about half way to the finish line a second signal is given, at which time the canoes underway immediately capsize, and those on the starting line get underway to rescue their partners in the regular canoe over canoe manner. When the rescuing craft reaches the capsized one, the operation may be speeded up if the paddler in the water quickly boards the rescuing craft and helps from the very beginning. In any event he must soon aboard it, for once empty and afloat, the rescued craft is tied astern and both paddlers paddle the rescuing craft tandem style towing the other behind.

This event like others can be modified if desired. For example it can be required that the rescuer do the rescue alone and unaided. This would mean that once the capsized

craft has been emptied and is again afloat that the rescuer will hold the two canoes together while the contestant in the water boards his own canoe and continues his race for the finish line. In this case, the rescuing craft's job is done once the capsized contestant is again aboard his own canoe.

SUBMARINE RACE

The submarine race is generally for single or tandem crews, however, if eighteen foot canoes are available it can be engaged in with four contestants to the canoe. Either single or double bladed paddles may be specified. The canoeists sit in the bottom and line up properly on the starting line. The course should be fifty to a hundred yards long. On the starting signal each canoe is swamped by submerging one gunwale until the canoe is entirely filled with water. Once both gunwales are beneath the water's surface, the crew commences to paddle toward the finish line. In tandems or fours, keeping in stroke is important, single blade or double blade. The first to reach the finish line with all members of the crew aboard wins.

NUMBERED SHINGLE RACE

During the war early training in ship handling was often safely and efficiently accelerated by the following simple but ingenious method of docking practice. Out in the bay, far from regular docks and narrow channels, cardboard boxes were thrown overboard. The ship would then steam away from the box, make a turn and approach the floating box to make a

simulated docking. This provided sufficient preliminary drill in ship handling of the precise kind necessary for safe docking at a solid pier.

The numbered shingle contest in recreational canoeing provides similar practice in methods of coming alongside, in addition to its entertainment element. For each canoe in the race there is a shingle or similar small piece of wood provided. Each canoe is given a number. For each canoe number one shingle is correspondingly numbered. The numbers should be very small so that the crew will have to bring their craft close alongside to read the number. If desired, numbers may be put only on one side so that often the shingle will have to be picked up, and turned over to have its number determined. Additional shingles without numbers can be added to increase the degree of difficulty. All canoes are lined up on the starting line. The shingles are scattered over the surface of the water about two hundred yards away. On the starting signal all canoes start rapidly off the line and head for the shingles. They repeatedly come alongside the shingles until one of them finds the correct shingle upon which it immediately races back with the shingle to the same line to win the contest. Whenever the wrong shingle is picked up, it may be thrown in any direction to thus handicap the crew looking for it. It can be seen that additional unnumbered shingles will increase the fun and the learning.

DIPPER RACE

Each crew consists of four; three paddlers and a dipper man. There must be an even number of entries, that is, two, four, or eight, because the dipper man occupies the bow position in the opponent's canoe. There is a starting line and a finish line. When the starting signal is given, the three paddlers attempt to paddle their canoe to the finish line before their opponents and also before the dipperman fills the canoe with water and swamps it. The dipper man and the paddlers cannot interfere with each other. The first canoe to reach the finish line is declared the winner.

OVERBOARD AND GUNWALE RACE

This event is most suitable for tandem crews. On the starting signal each crew gets underway rapidly toward the finish line. When the contestants are about midway down the course, a second signal is given and immediately the paddlers go overboard employing either of the methods described in the regular Overboard Race. Upon reentering the canoe, however, they mount the gunwale and finish the race paddling from that position.

PICK UP RELAY RACE

Each crew consists of four persons. At the start of the race, the canoe is manned by one and is on the starting line. A second person is in the water, treading water on the starting line nearby. The third and fourth members of the crew are treading water on the finish line which should be about 150

yards away. On the starting signal, the canoe is paddled rapidly to the finish line where one crew member is quickly taken aboard. The canoe is then paddled tandem back to the starting line, where the third member is picked up. The three then paddle the canoe back to the finish line where they pick up the fourth member. All four then paddle the canoe as rapidly as possible to the starting line which is the finish line for this event.

BANG AND GO BACK RACES

The Bang and Go Back race may be staged with paddles, brooms, hands, shingles or any ingenious paddle improvization. Most generally it is for tandem crews. On the starting signal the paddlers start off for the finish line. On the next signal, which may be given at any time along the course, the contestants are required to change direction and head for the opposite line. The wisest of them will reverse their positions in the canoe rather than turn the canoe about. The signal to "go back" may be given as many times as the referee desires, and the finish may be across either line, at the discretion of the referee.

BACKWARDS RACE

This can be staged for tandem crews, but when staged for one man crews, single blade, it is a test of real skill with a paddle. The crews are lined up on the starting line and started as in a regular straight race only backwards. The paddler who is the most skillful at doing an effective reverse

"J" stroke will win because he will be able to maintain a straight course. The others will be shifting from side to side and paddling a zig-zag course. This race affords the opportunity for a skilled paddler to win over a strong paddler.

PYRAMID

This is strictly a demonstration and should not be staged as a competitive event because of the danger to equipment and to contestants.

Four canoes are necessary, each paddled by one man, single blade. All four canoes should be structurally sound, and have keels, and the four men should average under 150 pounds, desirably.

The two which are to be the bottom canoes come together with bows and sterns even. Paddles are stowed in the bottoms. One paddler holds the canoes together. The other stands by to receive the third canoe which promptly comes along side. The paddler of the third canoe steps aboard, and his empty canoe is taken in across both canoes bottom up in the canoe over canoe rescue method. The fourth canoeist had in the meantime come alongside the other bottom canoe, stepped aboard, and trailed his canoe enough astern to avoid interference with the above operation. His canoe is now taken aboard, bottom up as described for the other. The result so far is a catamaram sort of arrangement; two canoes afloat side by side with two others resting on their gunwales, bottoms up, at right angles. The four men are distributed in the ends

of the bottom canoes. As prearranged two men mount the top canoes, facing each other. Each places one foot on the keel of one canoe and the other foot on the keel of the other canoe. On their shoulders they hold a pair of oars, parallel bar fashion. These oars were aboard one of the canoes for this purpose. A third man, desirably a light one, mounts the bars and does a shoulder stand or if able a hand stand. The fourth man takes any effective pose to complete the climax of the pyramid.

ESKIMO ROLL WITH HANDS

The eskimo roll done with an open canoe is probably related to the technique the eskimos use to right their closed-in water tight kyaks; when the rough seas over turn them. To the latter it is a technique necessary to survival; to the modern canoeist it is just a stunt whose only real value perhaps lies in emphasis upon the fact that a canoe filled with water does not sink.

For any but an experienced paddler, it is easier to learn the eskimo roll using the hands first and then graduating to the use of the paddle. At the start the canoe is right side up, filled with water. The canoeist is seated in the bottom near midships with his thighs braced under the thwart nearest midships. To start the roll the canoeist slides sideways to sit considerably off center. The gunwale on that side dips deeper under the water. It will be assumed here that the roll is to be made to the left. The right hand grasps the right

gunwale and draws it over toward the left. The head is held high and close to the right gunwale. The left hand may help if it is thrust downward, into the water and employed in an upward stroke. This operation will turn the canoe, bottom up. To complete the eskimo roll the canoe must continue its roll around to the original starting position. The canoeist accomplishes this by dropping his head and trunk to the vertical when the canoe turns over, and immediately swimming the canoe around the remaining distance by employing sculling stroke with his hands. The sculling strokes bring his body up to the surface, and because his body is in contact with the canoe the latter comes up also. His head must be kept down under the surface until the roll is completed. The back which contains the buoyancy chamber, the lungs must come up first. If the canoe is wide it will help to shift the hips over near the following gunwale during the last half of the roll.

ESKIMO ROLL WITH PADDLE

The same principles are involved as when the hands are used. The canoeist shifts his hips toward the side in the direction of the roll. His paddle is held in the normal manner and inserted in the water vertically, or more under the canoe. The necessary pressure is applied with the paddle to turn the canoe bottom up. The head and trunk are dropped to the vertical and the roll is finished by applying sculling strokes with the paddle blade or applying one strong smooth

stroke to bring the canoe around to the original position. At first, using the paddle when all of it is completely under water will feel awkward, but once experience is gained this method of doing the eskimo roll will prove far more effective than using the hands. Doing the roll with double bladed paddle will require more practice for most canoeists but if it is remembered to extend the blade in use for added leverage little difficulty will be encountered.

SURFACE DIVE ESKIMO ROLL

This is essentially a swimming skill rather than a canoeing skill. It is effective as a demonstration stunt. The capsized canoe is turned bottom up. The canoeist or swimmer which is his actual role in this event, takes a position abeam of the canoe, twenty to forty feet away. He then swims a smooth crawl stroke toward the canoe and when about a yard away does a quick surface dive to go down beneath the canoe. When leveled off probably six or more feet below the canoe he looks upward. If the water is clear the canoe will be plainly visible. Even in extremely murky water, the light on the surface of the water all around the canoe will cause it to be clearly outlined. He then swims up to grasp with his hands both gunwales about 18 inches forward of midships. This is roughly estimated by the visible outline of the canoe. His hands will not be readily visible to the audience since the gunwales of the overturned canoe will be about eight inches beneath the surface. He next raises his buttocks toward the surface until they are in

contact with the bottom of the canoe inside. Then he thrusts his legs in between the midships thwart and the canoe bottom. Once in this position, he lets go of the gunwales, drops head and trunk to near vertical and with sculling motions of his hands rolls the canoe to the upright position. This step is the same as for the second half of the eskimo roll described in a preceding section.

Though simple enough, once it is mastered this stunt has a spectacular effect on the audience if they haven't seen it before. They do not know what to expect. The swimmer surface dives and the next they see him he is sitting in the bottom of the upright canoe.

The above stunt can be performed by two canoeists, one swimming from each side. As prearranged they select thwarts nearer the ends and also cooperate to avoid working in opposite directions when rolling the canoe to the upright position. This same activity is most spectacular when performed by four or six men with the canvas covered war canoe found in many camps.

ESKIMO ROLL WITH SHIFT

This is a particularly good stunt for an aquatic day at camp. It works smoothly as follows. Three canoes each manned by one man are lined up abreast facing the audience. One man is the leader. Upon his signal all three capsize simultaneously and sit in their swamped canoes, amidships still facing the audience. They commence doing the eskimo roll in unison,

slowly and steadily. On a signal of the leader, such as a raised arm or verbal command, they go around another half turn and stop, with the canoes bottom up. As prearranged, they swim down out of their canoes to a depth of about six feet. The man at the right swims to the center canoe. The man at the center swims to the leftcanoe. The man at the left swims by the center canoe over to the one at the right. The former two work reasonable slowly. The latter because of a greater distance swims rapidly. All enter the canoes they have changed to and do a half roll to sit facing the audience. The audience will be surprised at seeing them in different canoes. The person in charge of the program should be prepared to allay any apprehension evidenced at this point, because of the seemingly long immersion.

WAR CANOE SHAKEOUT

The war canoe shakeout is aspectacular stunt. It is done in the regular shakeout manner except that added hands make the task lighter. It was mentioned in the section above on the SURFACE DIVE ESKIMO ROLL that the latter was very effective when done by several men in the war canoe. This surface dive eskimo roll could be effectively followed by a war canoe shake out employing the same crew.

FORMATION PADDLING (TO WALTZ MUSIC)

There are various possibilities for an effective formation paddling demonstration in conjunction with an aquatic show. Four canoes, one man single blade, are suggested. Fifteen

footers, with shoe keel or no keel are most desirable. The canoeists must be skilled. Waltz music should accompany the activity. Canoeists must stroke and do all movements in unison and in reasonable accord and timing with the music.

Here are some suggested maneuvers and activities. One man is leader and controls all that is done.

1. Approach demonstration area in single file about a canoe length apart. Spacing should be even.

2. Go into a circle with all paddling on outside of circle. Keep good spacing.

3. Shift to inside circle paddling. Those in audience who have done any paddling will appreciate the skill necessary to maintain a good circle while paddling on the inside.

4. Break circle and go into single file parallel to shoreline or grouped audience.

5. Do a ninety degree flank movement and come to a momentary stop facing audience, line abreast.

6. Scull sideways in pairs; the two canoes at the left go to left, the two at the right go to the right. Scull back to the starting position allowing three feet of space between canoes.

7. Left flank canoe scull sideward to the left. Right flank canoe scull sideward to the right. Inside right canoe paddle ahead. Inside left canoe paddle astern using reverse J stroke for precise control without shifting paddling sides.

8. Change to circle paddling as described in #2 above.

9. Change paddling positions from kneeling to standing on gunwales a little aft of midships, and continue circle paddling.

10. Change back to kneeling positions, continue circle briefly and then all turn abruptly to face the geometric center of the circle. Paddle slowly toward the center, checking speed as the bows converge. If there is little or no wind, the canoes can be stopped in this clover leaf position.

11. Stow paddles and do a head stand on bow seat or thwart. The latter can be paddled ahead of time for this purpose.

12. Resume kneeling positions. Back out of clover leaf formation. Resume circle. Break into single file. Do flank movement into line abreast facing audience.

13. Do simultaneous overboard entry into water in correct form.

14. Board canoes in unison and with correct precise movements.

The above suggests how an effective sequence of movements may be developed. There are many other possibilities.

SUBMARINE ROLL RACE

This race is most adaptable to single or tandem crews. They line up on the starting line, each crew seated in the bottom. On the starting signal, the crews swamp their canoes and commence hand paddling the swamped canoes toward the finish line, 100 or 150 yards away. On successive following

signals the crews eskimo roll their canoes while underway. The discretion of the referee determines how many signals are to be given for rolls. Three or four should be sufficient. The first to reach the finish line wins.

CHAPTER NINE

CANOEING PROGRAM IN SUMMER CAMPS

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CANOEING PROGRAM IN SUMMER CAMPS

The purpose of this chapter is to provide information on a basis sufficiently broad to permit the development of a desirable camp canoeing program, providing proper utilization is made of the material presented in the other chapters.

OBJECTIVES

The development of safe habits and skills should be an objective running through the entire canoeing program. There will be much material that will directly aim at this objective and other activities that will indirectly educate in terms of safety knowledge and skills. The program will fall short of being optimal, however, if other objectives are not included.

Physical development is an inevitable result of participation in a well rounded canoeing program. Few activities provide more large muscle activity. Physical development of the individual should therefore, be held as an objective of the canoeing program, and an effort made to provide diversification of activity to best achieve this objective.

Participation in any type of sport or physical activity that does not require a team or large numbers of persons contributes greatly to recreational development. The carry-

over into adult life of dual sports and activities engaged in by the individual is great. An individual who has learned to play team sports only often is unable to realize a carry-over into adulthood. Companions are not often available in sufficient numbers and facilities are usually difficult to find. Those who are skilled at individual and dual sports may carry on with them into advanced years. Canoeing is such an activity. Recreational development of the individual, therefore should be considered as an objective of the canoeing program.

Often children who lack the innate coordinations and temperament prerequisite to success in team games fail to become efficient socially and suffer emotionally, because they do not achieve acceptance by their peers. Many times they have the capacity to develop skill in dual and individual activities. Satisfaction coming from success in these activities contributes to the happiness of these young people. Emotional tensions may be dissolved. Success brings peer acceptance. More emotional tensions disappear as a result. Social development is enhanced. This pattern has been the making of many a seemingly hopelessly introverted youngster. Social and emotional development should, therefore, be considered as objectives of the canoeing program.

Intellectual development may be added as an objective. The content of this chapter will substantiate this.

PHYSICAL LAYOUT

LOCATION OF CANOE AREA

Many factors influence the selection of the canoe section of the general waterfront area, therefore, the recommendations put forth here must be considered merely suggestive. Experience indicates that the canoe area should be apart from the swimming area and other activity areas. In any event, it should be a separately designated area planned with a view to preventing interference with, or by, the swimming or boating program or other waterfront activities. Ideally, the canoe area should be several hundred feet away from the nearest adjacent section. This minimizes interference by noise, avoids distraction, and enables the canoeing instructor to completely control his area, from the instructional and supervisory point of view, and in respect to arrangement of the area, its care, development, and the disposition, supervision, and maintenance ofequipment.

It is desirable that the area have shade trees and that the terrain be reasonably level and its elevation not more than a few feet above that of the water. Rough, uneven ground and steep bankings should be avoided, if possible. If the camp owns considerable shoreline, it is wise to utilize land adjacent to a lee cove, if there is one, other things permitting.

DEVELOPMENT AND CARE OF CANOE AREA

If the area is wooded, it is desirable to clear out the underbrush. If the trees are too numerous, the smaller and imperfect ones should be removed. The large shade trees should remain. Their lower limbs should be neatly removed. It is desirable that the direct rays of the sun be prevented from entering the area, and striking the canoes. The area should be light enough and clear enough, however, to promote the growth of grass to prevent erosion.

No refuse should be allowed to collect on the ground. If necessary, a trash can should be provided in the area. The grounds should be kept looking shipshape at all times.

Odds and ends of clothing, shoes, and other personal possessions of campers look unbecoming spread around the canoeing area, onthe ground, and on limbs of trees, or on bushes adjacent to the cleared area. A clothes rack, preferably rustic, may be provided and the campers trained to use them. If smoking is permitted in camp by any group or groups, field stripping of cigarette butts should be required in the canoeing area. Any hazardously uneven ground or protruding stumps might invite grading or removal.

RACKS FOR CANOES

In chapter Two various types of racks are discussed and reasons given for the provision of adequate facilities for racking. There is no need for repetition for that information

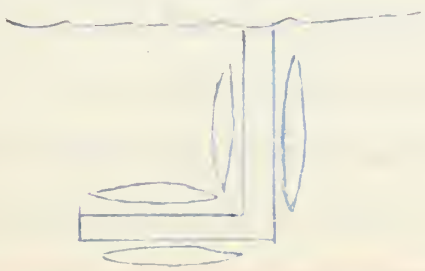
here. It is strongly recommended that advantage be taken of a free drawing issued by the American Red Cross entitled Types of Outdoor Canoe Storage Racks by W. Van B. Claussen. This drawing may be procured through any American Red Cross chapter office. If they are not on hand, the chapter can send for them, or they can be requested directly from Area or National headquarters of the National Red Cross.

CANOE DOCKS

The value of having an adequate type of dock structure is generally minimized. Actually docks are an important consideration, both from point of view from time consumption and the instructional possibilities. In addition they have a bearing on care and long life of the camp canoes. Much time is wasted from instructional periods in the process of launching and landing canoes at the beginning and end of classes when docks are inadequate. Also the camper has fewer experiences launching from various dock faces.

An "I" or single finger dock, commonly seen in camps, is not a suitable dock for a good camp canoe program. It is fine for a family canoe and boat dock at a summer place on the lake.

The L type dock is satisfactory for a camp with not more than a half dozen canoes.



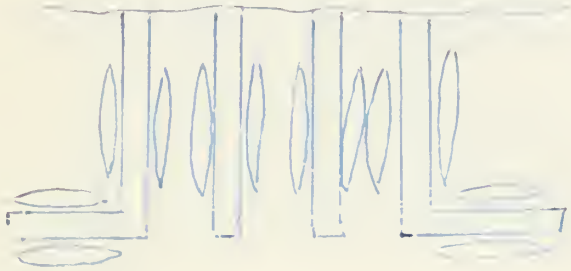
L type dock indicating launching and landing possibilities.

The width of docks should be a minimum of four feet and the flooring should be laid transverse to minimize the danger of slipping when the boards become wet.

The T type dock is suitable for most camp canoeing programs and is the one most strongly recommended.

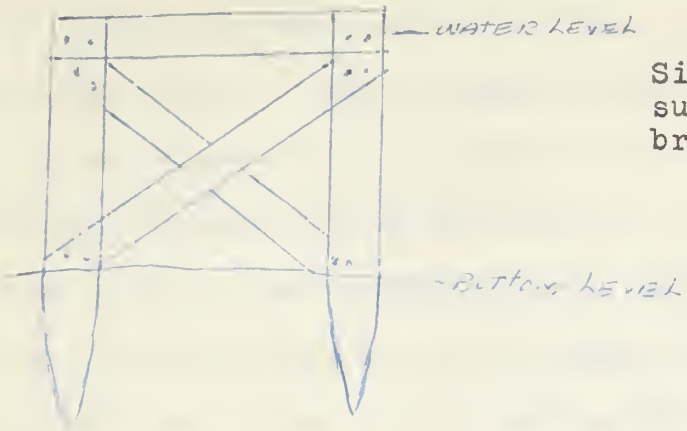
T type dock indicating launching and landing possibilities.

For camps with a large number of canoes a combination of L docks and finger docks provides about the best layout possible without involving prohibitive expense.



Combinations of L's and Fingers indicating launching and landing possibilities.

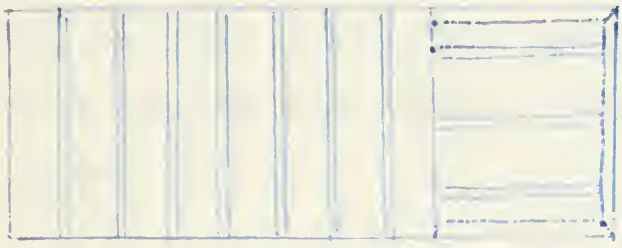
It is suggested that none of these types be set up as floats. They should be solid docks set up on firm supports. If the bottom is suitable for driving, a simple type of support can be constructed by pointing the bottom ends of two 2" x 4" or 4" x 4" planks and driving them in pairs, to accomodate the width of the dock sections and at intervals determined necessary to rigidly support the dock sections. Usually the sections must be supported at the middle as well as at the ends.



Simple type of driven support showing top brace and cross bracing.

The extreme outside measurement of this support should be four inches less than the outside measurement of the width of the dock section, for reasons to be indicated below.

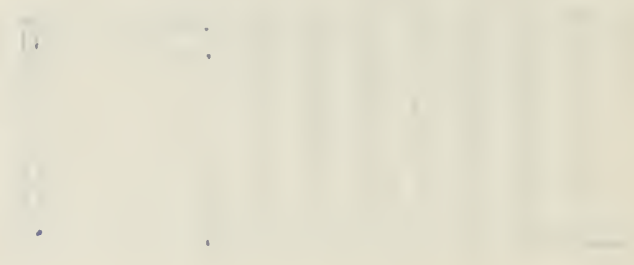
The dock section should be solidly constructed to assure that it will last for many years.



Sketch of simple dock section construction.

The dock section will rest on the supports on its 2"x4" planks indicated in the drawing. The 2"x6" outer frame will hang over the supports preventing lateral slipping.

Often it is desired to add to the rigidity of the supports outlined above. If so, they may be joined together with longitudinal braces. One inch stock is satisfactory, because once the dock section is placed on the supports, they have thereby considerable longitudinal bracing under ordinary circumstances.

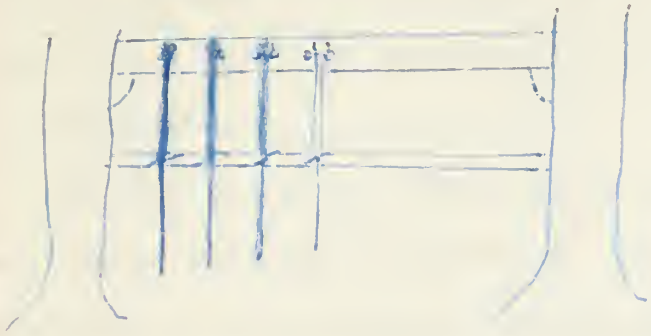


In planning a dock support system, consideration must be given to the rise or fall of water during the camp season. The above is satisfactory if the water level is constant. If it customarily changes during the season, but with a range of not more than a foot, the supports should be planned so that the flooring of the docks will not be awash at high water. Where great variations occur, expert advice will be needed, for many factors are involved, such as range of water level, type of bottom, gradiant of bottom, intensity and direction of prevailing wind and waves. Page twenty-seven to thirty in A Camp Aquatic Program by Richard H. Bearse and Sidney C. Hazelton contain excellent suggestions and diagrams of types of underwater supports for docks. This book is printed by the authors and can be procured from Sidney C. Hazelton, Hanover, N.H., price $1.50.

PADDLE RACKS

Paddles should not be left lying around the canoeing area, against trees, or on top of the canoes. Some type of paddle rack or locker is desirable. A suggested type is made by drilling a length of 2"x4" plank with holes to accomodate driven pegs. The paddles may be hung by their grips from the pegs. This rack can be put up between two trees. Another 2"x4" or 2"x2" board should be added parallel to the above at an elevation corresponding to the junction of the paddle blades with the paddle shafts as they hang on the rack. If this is

done, the paddles may be lashed to the second board to prevent blowing down or rattling in the wind.



Suggested type of paddle rack

EQUIPMENT

CANOES

Light weight canoes, fifteen feet in length, are most suitable for the average camp. Canoes larger than this are rather heavy for immature persons to lift. Even an adult enjoys a light weight fifteen footer.

Most waterfront directors and canoeing instructors inherit a lot of large, overpainted canoes, and their problems never end. A camp owner with large heavy overpainted canoes should engage an experienced person or concern to recanvas them and to lighten them in any way possible. Removing false floorboards, replacing seats with thwarts, hollowing out the under surface of thwarts, will take off some weight, but careful handling of canoes so that they will not require constant painting is the best way to keep them light in weight.

Open gunwale models are preferred to others. They are easily cleaned and as a rule have less tumblehome than closed

models and are consequently superior for all around use.

Canoes should be kept on the racks when not is use. Letting them lie around on the ground, on the docks, or on the water tied to the dock, is inviting trouble in the form of damage to the craft.

At the end of the day, stormlines should be used to lash each canoe securely to its rack. This is to prevent its being blown off, or accidentally being knocked off, while the area is left unsupervised. Whenever, in fact, a storm is coming up at any time, these lines should be applied.

During the balance of the year when the canoes are not in use, they should be stored under cover in a good substantial building such as the dining hall. They should be supported bottom up on horses, benches, or tables, so arranged as to allow steady level support with about a twenty-five per cent overhang at each end of every canoe. This is the best way to preserve their structure in the form the builder planned.

It is unwise to paint the canoe unless it is necessary. It should be sanded and varnished once each year. This will keep it in good shape and keep down the weight. If the inside needs varnishing, it should not be neglected. If it does not need varnishing, it should be let go.

PADDLES

If the camp is located on a lake where all paddling is done in deep water, spruce paddles are recommended. They are light and firm. The three piece type is best. Either type

will split easily, hoever, if a paddle is allowed to hit a rock while in use, or if it is stepped on because it has been left lying around on the dock or ground.

When selecting soft wood paddles, those should be chosen that have the edge grain of the shaft facing in the direction favorable to strength. This is the same factor involved in submitting the edge grain of a baseball bat for contact with the ball. If any of the camp canoeing is done on shallow streams, some hardwood paddles should be available for use while in the shallows. They can stand rougher use.

As to size, it should be planned to have paddles that reach from the ground to the paddlers' eyebrows. This is a rough but expedient way to decide length. Since height is a variable thing among campers, it will be necessary to have an assortment of lengths. Husky, heavily muscled paddlers will probably prefer paddles equal in length to the paddlers' height. This should be anticipated and not frowned upon.

A good project for the handcraft department is to serve the shafts of the paddles from the throat up the shaft about eight inches with leather. This affords chafing protection, since in properly executing the J-stroke, the shaft is allowed to rub along the gunwale toward the end of the stroke.

Double bladed paddles should be of soft wood and of the notched ferrule type if they are spoons. This is to allow for right hand or left hand control, as the paddler desires.

CUSHIONS

Cushions or kneeling pads are easy to make. Some suggestions are mentioned in Chapter Two. This could be another handcraft project. Each camper might be required to make his own pad. They should be kept in a locker or on a special rack provided for them, and not allowed to be scattered about camp.

GENERAL ADMINISTRATION AND SUPERVISION

As in all aquatic activities, the health and safety of everyone in camp is the first consideration in the development of a canoeing program. This consideration should never be relaxed from the first to the last day of the camping season. With proper organization this safety concern, however, need not approach a fetish. It can quietly permeate each activity and be intrinsic in the nature of the organization of the whole program. Beyond this the program should be planned to provide instruction and recreation in the most interesting and enjoyable manner, keeping in sight the objectives discussed earlier in this chapter.

THE INSTRUCTOR

The instructor should be carefully chosen if the program objectives are to be accomplished. In addition to being a skilled canoeist, he should possess qualities of responsibility, firmness, kindliness, patience, and enthusiasm for the activity. A good small craft man will spend most of his waking hours on the

waterfront. In off hours he will be working on canoes, caring for grounds, and dock, giving individual instruction to some youngster who wants to learn what he has been slow to pick up in class. He must possess character enough to insist in a friendly, but firm way that rules for the canoeing waterfront and canoeing activities be adhered to by every member of the camp staff as well as by the campers.

SCHEDULING OF CLASSES

Scheduling of classes will depend upon the plan in operation for the entire camp. In some camps the canoeing class will meet for one hour once a day. In other camps the arrangement may be two hour classes on alternate days. In any event, the size of the class will be controlled by the number of canoes the camp has. For all courses except the Advanced, the number of campers may be double the number of canoes, because the emphasis is on tandem paddling. The classes for advanced canoeists should be planned on the basis of the number of campers equal to the number of canoes, for in the advanced course, the emphasis is on single paddling. Camp directors should keep in mind that a full day of class instruction work for a canoeing instructor is a hard physical load for the instructor who attempts to do a good job. More than six hours per day will so tax the instructor that his efficiency will fall off greatly.

AREA FOR ACTIVITIES AFLOAT

Canoeing activity on and in the water should be kept clear

of the swimming area and clear of the boating area, although under certain controlled conditions and during recreational periods the area for canoes and boats may be a common one. If the body of water is large it may be advisable to designate the activity area. The reason for this is to prevent canoes from going into coves, or behind points of land and thus out of sight of the main waterfront area and consequently out of overall supervision by the waterfront director. The waterfront director may grant the canoeing instructor permission to operate anywhere the latter wishes during class periods. If the canoeing instructor measures up to the qualities he should possess, this arrangement is desirable in view of the fact that as part of the training program the canoeing instructor may wish to utilize everything the body of water offers. For example, on a windy day the lee of a point of land some distance from camp might afford quiet smooth water desirable for class work, or a cruise along an uneven shoreline might be desirable for practice in applying strokes learned in instructional periods.

As a general thing, however, classwork should not be conducted at a distance too far from camp. Sudden blows coming up might present problems, and time might be wasted from instructional work, if a long paddle going and coming is necessary.

Operating in a designated area is necessary during free recreational periods unless the body of water is small and all parts of it visible from the main water front. Ingenuity will

help best in determining methods of marking the area. A wide stripe of paint on a large stone on a point of land and the same on the opposite shore would provide one marking method. Buoyed flags could be utilized. There are other methods, depending upon what nature has provided.

SUPERVISION OF RECREATION PERIODS

Recreational periods for the use of smallcraft including canoes will be usually in the evening, from after the evening meal, till sunset, or shortly thereafter. Supervision of the recreation period will be an over all supervision of all activities permitted. Canoes, boats, surfboards, and sailboats may be involved. The waterfront director will have the overall responsibility.

Only those campers qualified to use canoes should be permitted to go out in them. A check out and check in system should be employed, preferably a system that will enable the supervisor to know at all times which campers are out in canoes and in which canoes they are. One method of doing this is to have a check board near the canoe docks. On the board should be painted in miniature, pictures of canoes, one for each canoe in camp. These miniatures should bear the names or numbers of the canoes they represent. When the camper comes to the waterfront to take out a canoe he should hang his tag on a hook on the proper canoe on the board, before embarking. A member of the camp staff should be in attendance to see that this is done. Upon return, when he has racked his canoe, he should take his tag off the board. If this system is adhered to precisely no log or list will be

necessary.

Life boats should patrol the recreational area, not only for the exigency of a rescue, but to maintain order and see that the activity bounds are observed.

There is such a thing as being unnecessarily strict about prerequisites to the use of canoes. There is no sensible reason why any camper should be deprived of using a canoe during the recreational period if he can swim sufficiently well to pass the intermediate test in swimming as prescribed by the American Red Cross Water Safety Service. No special canoe tests are necessary, nor is a medical examination necessary for any child certified as healthy enough to engage in the other camp activities. The recreational period should provide freedom of activity within the bounds of safety. Even though a camper has not had canoeing instruction, if he is required to paddle from a kneeling position, he will be safe enough under supervision. It should be stated here that all campers and staff should be present at a demonstration and explanation of canoe safety prior to the opening of the canoeing waterfront. This should be done on the first or second day of camp. The demonstration should include carrying and launching methods, boarding, positions in the canoe, self rescue, and rescue of others. With this brief background the recreation period will be safe, providing good supervision prevails.

It is part of discretion to call off canoeing activity during recreational periods when the water is unusually rough.

Even late in the season when all campers have had training in canoeing it is still good policy not to invite danger. It should be kept in mind that assuming responsibility for other peoples' children is not a thing to be taken lightly.

CANOEING INSTRUCTION FOR ONE WEEK CAMPERS

It will be assumed that six hours per week will be allotted to canoeing instruction; that is to say, each group of campers will receive six hours of instruction each week. This is an arbitrary figure, but is reasonable, since a camp equipped with canoes and employing a canoeing instructor may be expected to seek return from its investment. In any event it is necessary to proceed on the basis of a specific amount of time allotted.

One week campers, therefore, will receive just six hours of instruction. It is obvious that in six hours not a great deal can be done from the standpoint of all-around canoeing training, but a lot can be done regarding personal safety, and some ground laid for reasonably efficient canoe handling. Each camper is at least a potential Sunday afternoon paddler on some lake or river near his home. It should be attempted to assure that his chances of placing himself in peril will be minimized through the one week instruction, and that he will know how to rescue himself easily if he should capsize. Beyond the safety objective it can be hoped that a recreation vista may be opened to some. The instructor should read the section on Teaching Suggestions before going further.

THE FIRST HOUR

1. The instructor should open the class with a brief explanation to the effect that canoes should be handled carefully during carrying and launching operations. This should not be a lengthy discussion, rather a few brief but effective statements with reference to the way in which canoes are constructed and how easily the canvas and underlying wooden structure may be damaged by careless handling. He should then choose one camper to work with him and demonstrate how to carry the canoe from its rack to the launching place.

2. The canoe should be set down on the ground gently, if the ground is smooth, or otherwise on the dock, and at this point the names of the essential parts of the canoe should be indicated. There is no need to go into great detail. The average youngster is interested in nomenclature providing he is not swamped with more of it than he can digest. Questions by campers may lead to some elaboration on nomenclature and on construction. This development if kept in control will contribute to a better understanding of the canoe and its structure, and build among the group an appreciation of why it should not be carelessly handled.

3. A simple two-man launching method is demonstrated next. Other two-man methods can be added in accordance with the type of dock but can be introduced incidentally to crews launching at a particular part of the dock, and therefore needing the information. This should be followed by a demonstration and

explanation of how safely to get into the canoe and of the proper positions to take in it. Kneeling cushions and paddles for all should be on hand.

4. The members of the class should be instructed to select tandem partners of approximately their own weight. The instructor will not need to take the time to supervise this, except to look over the group in general to pick out any gross weight differences between the members of a tandem crew.

5. One crew should be appointed to demonstrate carrying, launching, boarding, and taking paddling positions in the canoe. The balance of the class should look on. Since no instruction has as yet been given on paddling strokes, proponents of land drill on strokes may consider that the crew afloat has reached an impasse. This is not so, for practically anyone can use a paddle well enough on the first attempt to get the canoe under way and to stop it in approximately the desired place. The instructor should so direct this crew, and ask them to stand by a reasonable distance away from the dock. The class will learn from this operation what is expected of them and profit from the instructions and corrections given the demonstrating crew by the instructor.

6. Under instruction and direction the remaining crews should follow the above steps and take places afloat near the first crew awaiting further instructions.

7. A drill should be conducted on the following strokes.:

a. Draw stroke
b. Push over stroke
c. Sweep strokes
d. Reverse sweep strokes.

Information on teaching these strokes will be found in the section on Teaching Suggestions.

8. A hand paddling race may be staged at the end of class, for its game value, and for its value of teaching that a canoe can be paddled by hand in the event of lost or broken paddles. This event is also of value in so far as it impresses upon the campers that a low position in the canoe contributes to greater stability. This will already have been impressed upon them verbally and by demonstration, but this experience of paddling from the lowest possible position will have the most lasting effect upon them.

9. The instructor should next demonstrate how to come along side the dock for disembarking. He should disembark and rack his canoe, and then supervise the class in doing the same. This ends the first hour of instruction.

THE SECOND HOUR

1. Under close supervision the class should launch and board their canoes taking the same positions as they had in their first lesson. In other words, those who were paddling in the bow position, again take the bow position. The reason for this will be obvious as the lesson proceeds.

2. The strokes practiced in the first lesson should be reviewed and the following added: the bow stroke, the backwater stroke, and the bow-rudder stroke.

3. Drill in changing positions in the canoe should be conducted next. This drill may be repeated several times, but

should end up with the original position of the paddlers changed, that is so that the members of the class who were paddling bow will be now paddling stern and vice versa. Those persons who believe that changing positions should not be permitted in a camp canoeing program should consider that when not under supervision these young people are not likely to come ashore for changing positions and therefore should be taught how to make the change safely, especially in view of the fact that there is actually no danger involved when the thing is done correctly.

4. The drill in changing positions was put in above so that the following step might be undertaken without loss of time. A complete review and practice of all strokes should be conducted with the class members in their new positions.

5. What ever remaining time is available can be applied to a practice session in making landings at the dock faces. A better performance should be required because the strokes just practiced and reviewed are applicable to canoe handling of this sort.

6. The period is closed with disembarking and racking of the canoes. This again must be under supervision and a slightly better performance expected than on the first day.

THE THIRD HOUR

1. A dry land drill for practice of the "J" stroke should be conducted.

2. If there is a satisfactory beach adjacent to the canoe

dock, the instructor should demonstrate, with one of the campers as his partner, launching and boarding under these conditions; otherwise the dock must be used as before.

3. The class should then launch and board from the beach under close supervision, and stand by afloat as usualawaiting further instructions.

4. A review of all previously learned strokes should be conducted, and the "J" stroke added. Practice of the "J" stroke will initiate the first straight away paddling.

5. Crew members should change places and review strokes. This change of positions is necessary for the practice of the "J" stroke since this stroke is not used by the bowman.

6. A demonstration and practice of entering deep water from the canoe and boarding the canoe from deep water should be conducted.

7. If time remains, a modified version of the "over-board race" may be staged. This will provide fun and also be further practice in the proper method of going overboard and of entering the canoe from deep water.

8. All hands should make landings, rack their canoes, and put away their other gear.

THE FOURTH HOUR

1. Steps to get all hands afloat are the same as in previous lessons.

2. The instructor should demonstrate and explain self rescue in the event of capsizing. He should capsize his canoe,

board it, and hand paddle it to shallow water, where it should be correctly emptied, and boarded again.

3. One crew should be selected to carry out the above self rescue steps, under careful step by step direction of the instructor. The balance of the class should look on to learn what is expected of them and to profit by the instructions given the leading crew.

4. Using the stagger system the instructor should put the whole class through the above operation. He should not have all crews capsize at the same time, for this would mean poor supervision under conditions that could invite danger on this initial session on self rescue. The instructor should designate crews one at a time to capsize their canoes and should carefully direct the self rescue steps. Once a crew has got under way for shore, another can be designated to do the same thing, and so on. The operation should be timed so that the instructor will be able to watch all phases of the self rescue steps of every crew. Needless to say the instructor must be afloat in his own canoe, rather than teaching from shore.

5. If there is considerable time remaining, a brief practice session in strokes may be conducted leaving time for the next activity.

6. At the close of the paddling practice all canoes may be lined up abreast, facing shore, about fifty yards out. A modified submarine race may be staged in order to provide additional self rescue experience in an easy to take manner.

A suggested way to stage this event is as follows. The instructor should start at one end of the line of canoes, and one at a time direct them to capsize and hold on to their overturned canoes. Then at his command all crews will roll their canoes to the upright position. On the next command they will board the swamped canoes in the proper manner. When all are aboard, the starting signal is given and they commence hand paddling to shore. The instructor should station his canoe in shallow water near shore and designate his position as the finish line so that they will not be tempted to run the canoes aground. A life boat should be assigned to patrol while all canoes are in the swamped condition.

7. The canoes should then be emptied and carried ashore to be racked.

THE FIFTH HOUR

1. The early part of the period should be devoted to practice in the rescue of a tired swimmer. Bowmen may be designated as victims first. Though no instruction has been given in single paddling, the members of the class will now be able to handle the canoes well enough for this purpose. This session should be conducted in very calm water. When all bowmen have been rescued, the sternmen act as victims and the operation is repeated.

2. One of the best ways to learn to apply the strokes which have been given is in docking practice, that is practice in coming along side the dock in a satisfactory manner. During

the balance of this period, therefore, the instructor should station himself on the dock and direct the docking practice. He should see that the crews have the opportunity to try the different faces of the dock. Several crews should be making dockings simultaneously all during this phase of the instruction and practice, otherwise interest will wane and not all crews will get the experience they need. It may be wise to encourage or insist upon changing places so that all persons will have the training in both stern and bow positions.

THE SIXTH HOUR

1. The previous lessons covered the necessary activities in keeping with stated objectives. The instructor will find that the most disappointing phases as far as pupil progress is concerned will have been those dealing with strokes. It is therefore indicated here that this final period be devoted to paddling. The instructor may take the group on a little trip along the shore of the lake. This will provide practice opportunity. If this is not feasible formation paddling may be attempted, the object being to have all canoes maintain their positions. Or a follow the leader type of obstacle cruise may be undertaken. The instructor should not expect too much as far as development of paddling skill is concerned. At least he will have laid a foundation.

CANOEING INSTRUCTION FOR TWO WEEK CAMPERS

Young people in camp for two weeks only, present the same problem of limited time allotment to canoeing instruction that

exists for the one week campers. More can be done in two weeks than in one week, however, but the difference in time allotted is not sufficient to significantly alter the pattern set up for the one week group. The outline below will therefore be quite similar to the one presented above, except that more time will be devoted to each activity, and rescue of others will be enlarged to include the canoe - over - canoe rescue. For the same reasons that six hours were considered as reasonable time allotted to one week campers, it will be assumed here that twelve hours will be allotted to two week campers, and the instruction outline set up on that basis. The instructor should read the section on Teaching Suggestions before going further.

THE FIRST HOUR

1. The class should be opened with a brief explanation of why canoes should be handled carefully. It should be indicated that the arrangement of racking facilities and proper docks are primarily for the preservation of the canoes. Mention of the structure of the canoe will bring light to bear on why it must not be abused. The names of the essential parts of the canoe should be discussed.

2. Two-man carrying methods should be demonstrated and explained.

3. A demonstration-practice period on methods of launching and of hauling in the canoes should follow.

4. Explanation, demonstration, and practice period on the proper and safe method of getting into and out of the canoe.

5. All hands are now ready to get afloat for paddling instruction.

6. A demonstration-practice session should be conducted on the draw stroke, and the pushover stroke.

7. A hand paddling race should be staged for fun, and to emphasize stability of low positions.

8. Landings should be made and canoes put on the racks.

THE SECOND HOUR

1. The first part of the period should be devoted to a review of the strokes taught in the first lesson, and the addition of the sweep strokes and the reverse sweeps.

2. Half way through the period, a demonstration and practice of changing positions in the canoe should be conducted.

3. Step number one should be repeated with the canoeists in changed positions.

4. Supervised landings should be made and the canoes and other gear put away.

THE THIRD HOUR

1. Review practice should be conducted on all previously taught strokes and the bow stroke and the back-water stroke added. Crew members should change paddling positions half way through, to assure that they get the necessary practice in both bow and stern positions.

2. The next part of the period should comprise a demonstration and practice of the technique of going overboard and of getting back into the canoe from deep water.

3. The period should be closed with a modified version of the "overboard race".

THE FOURTH HOUR

1. It is time to repeat that in every lesson the carrying, launching, and boarding of the canoes should be supervised at all times or the habit of careful handling will not be solidified.

2. A review practice should be conducted on all strokes thus far taught and the bow-rudder stroke and the cross bow rudder stroke added. Crew members should change positions half way through the period to assure that all persons get practice in all strokes in both bow and stern positions.

3. The next activity is a demonstration and practice period on self rescue in the event of capsizing, namely the boarding and hand paddling of a swamped canoe to shore.

4. The hour is finished with a modified submarine race.

THE FIFTH HOUR

1. A "dry land" drill on the "J" stroke should open the period. This is theonly stroke in which a dry land drill is believed to justify the time spent. This drill is conducted with the canoeists standing on the dock's edge or kneeling there, or standing at knees depth in shallow water.

2. The usual review of strokes should be conducted and the "J" stroke, afloat, added. This will consume the entire period. The crew members should change paddling positions, to give all persons practice on the "J" stroke.

THE SIXTH HOUR

1. All strokes should be reviewed, placing emphasis on the "J" stroke. Bowmen should be instructed not to help with the steering, but to merely paddle a regular bow stroke. The best crew, may be placed in the lead position and all canoes started underway in column formation. A good "J" stroke will be necessary for keeping in line. The pace should be slow and the instructor should paddle up and down the line checking and helping.

2. A demonstration and practice period on the rescue of a tired swimmer should be conducted.

3. The lesson may be finished off with a recreational activity that applied to the lesson and that at the same time will provide fun. It is a modification of the PICK UP RELAY RACE described in the chapter on recreational canoeing. Let us assume that there are twenty-four campers in the class. They will be manning twelve canoes. Four crews should make landings and put away their canoes. That will leave eight canoes afloat and eight free men who have put away their canoes. The eight free men may be used as swimmers. They should swim out into the lake about seventy-five yards off shore and form an even line, parallel to the shore line, and space themselves about twenty feet apart. The canoes should be lined up about the same distance apart. The end of the dock may be used as one end of a starting line. This same line is the finishing line. On the starting signal the canoes get underway and head for their respective

swimmers stationed as described above. The object is to rescue the swimmers and race back to the finish line. The first crew to get back wins.

THE SEVENTH HOUR

1. With the exception of the time required to launch the canoes at the beginning of class and the time required to haul them in and rack them at the end of class, the entire lesson should be devoted to docking practice. The instructor should team up with the most skilful member of the group and demonstrate methods of coming alongside the dock from varying angles, and at all the different faces of the dock. Slow careful handling is necessary in the demonstration and the canoe must always be brought to a definite stop before being allowed to touch the dock. After the demonstration, the class should begin their practice. This is interesting activity and they will like it. The instructor should station himself on the dock for supervision of this work. He must be alert to see that all crews get approximately the same number of opportunities, and to see that they try their dockings at all the possible places along the dock. Half way through the allotted time crew members should change places in the canoes to assure practice in both bow and stern positions. This activity is one of the most efficient methods of providing realistic application of the strokes learned in the earlier lessons.

THE EIGHTH HOUR

1. This period should be devoted to a cruise along the

shore of the body of water. The purpose of this is to provide further realistic application of strokes learned, particularly the "J" stroke. The pace must be slow to allow all crews to keep up. The instructor supervises, checks on proper performance of strokes, and teaches, by paddling up and down the line of the canoes as they go along. He must be particularly on the lookout for incorrect steering, that is various interpretations of the "J" stroke. Most of the sternmen will want to steer with a stern rudder at the beginning. This must be checked.

THE NINTH HOUR

1. The major portion of the period is devoted to the canoe-over-canoe rescue. The instructor should have the class afloat, and in a large circle, or arc of a circle. One crew is appointed to capsize in the center of the circle. The instructor demonstrates slowly and carefully how to do the canoe-over-canoe rescue. After the demonstration, the canoes are "buddied" in pairs. As directed by the instructor, the crews capsize their canoes and are rescued by their "buddies". The instructor should not have more canoes capsized than he can watch at a given time. This operation should be kept up until all crews have had the experience of doing the rescue. Weak ones will have to repeat.

2. If time permits review of practice in coming alongside objects may be effected by staging a Numbered Shingle Race. This activity is excellent for teaching precise canoe handling.

THE TENTH HOUR

1. The first and major part of the period is allotted to formation paddling. This is of the ship maneuver type. The changes in direction are executed simultaneously on the command of the instructor. If the movement is to be a column movement and not a turn movement the instructor makes it clear when his preparatory order is given. This is a good activity because the challenge to keep good station makes the paddlers extend themselves and thus develop faster.

2. Review of the canoe-over-canoe rescue may be interestingly accomplished during the latter part of this period by staging a modified version of the Canoe-Over-Canoe Rescue Race. The canoes should be paired. Half of the canoes are then stationed on a starting line. Their partners are stationed on a parallel line, about a hundred yards away. Partners should be opposite each other. On the starting signal the canoes on the first line start paddling at their best speed toward their partners, and at the same time the latter capsize their canoes on their line. When the canoes under way reach the capsized canoes the canoe-over-canoe rescue is employed. The rescued canoes then race it out for the starting line. The first to get there wins. This is a relay type of thing and both crews share the honor of the winning.

THE ELEVENTH HOUR

1. The first and major portion of this period may be profitably given to a combination cruise and formation paddling.

For example, the group may be taken on a little trip to a place they like at another part of the lake. An occasional change of direction may be thrown in in the form of an emergency turn, while under way. When the objective is reached, landings should be supervised on the best section of beach available. The landings should be done correctly as previously taught. The instructor should have the canoes carried up and placed bottom side up on a smooth shady section of the shore. If there is any bark or any chips of wood lying around on the ground the canoeists should place them under the ends and the gunwale of each canoe. After a couple of minutes rest the steps necessary to get afloat again should be taken and the return to camp started.

2. The period may be closed with a session on the rescue of a helpless but floating victim. Some canoes will have to be put up ahead of time to make victims available.

THE TWELFTH HOUR

1. This final period is left open for the instructor to use for extra work on whatever phases of the foregoing periods need more attention. He may choose to make it a "tip" period, wherein the crews can select their own activity for emphasis and additional help from the instructor.

BEGINNER COURSE IN CANOEING

Actually the material as presented in the section above on Canoeing for Two-Week Campers is adequate for a BEGINNER COURSE, with the provision of more time, to do a more thorough job with each topic. It is suggested therefore that campers in camp for three or four weeks be enrolled in a BEGINNER course and that the material outlined in the section on Canoeing For Two-Week Campers be used for their instruction. Eighteen to Twenty-four hours devoted to the same material should be adequate to achieve sufficient skill to warrant credit for the completion of a course of instruction. This is particularly true in view of the fact that additional days in camp mean additional activity of the informal sort during the evening recreational periods. All this put together should do the job.

Based on the above premise, it will not be necessary to outline in detail each lesson plan for the Beginners Course. Certain problems may arise for the instructor, however, in deciding which parts of the material on which to spend the extra time. It will be attempted to clarify this in the following paragraphs.

The outline of activities for the first, second and third hours may stand as presented.

The material outlined for "THE FOURTH HOUR" should have its time allotment doubled. This should be done by holding over till the next day, or next lesson the topics in #3 and #4, on self rescue, and the modified submarine race recreational activity,

respectively. This inserts an additional hour making a new total of thirteen.

The "FIFTH HOUR" may stand as presented.

The outline of activities for the "SIXTH HOUR" should have its time allotment doubled. Devote one hour to topic #1, on review and practice of all strokes. Devote another hour to topics #2 and #3, on the rescue of a tired swimmer, and the recreational activity that applies to the same. Be sure that all participate in all phases of the latter. This makes a new total of fourteen hours.

The "seventh hour" may stand as presented.

The "eighth hour" may stand as presented.

The time allotment should be doubled for the activities presented in "the ninth hour". One hour should be devoted to topic #1 on the canoe-over-canoe rescue. Another hour should be devoted to topic #2, on practice in coming along side objects. Read carefully the section in the chapter on recreational canoeing, entitled "numbered shingle race". It can be modified in several ways during the period to keep up the interest. A whole hour devoted to this activity is justified because it teaches precise canoe handling while at the same time providing fun. The instructor must be sure to make it increasingly more difficult, from the beginning to the end so that interest will not lag. It is suggested that for a beginning unnumbered shingles be used and the crews allowed to race for any shingle, and that from this simple start complexity be gradually added. This makes a new

total of fifteen hours.

The "tenth hour" should be presented as outlined but should be repeated on the following hour. In order to avoid precise repitition, the maneuvers may be conducted in a changed sequence on the second day, and new movements added. Likewise the "canoe-over-canoe rescue race" may be modified, as for example requiring, on the second day, that when the rescue has been effected that the two bowmen hold the canoes tightly together by their gunwales, while the sternmen, one in each canoe paddle the thus formed chariot back to the finish line. This makes a new total of sixteen hours.

The "eleventh hour" should be changed as follows: one hour may be devoted to topic #1. This same topic should be repeated on the next day, but the cruise should be to a different part of the lake, preferably to a place presenting a different landing situation, for example a landing on a peninsula, with a carry across it and a reembarking on the other side. Topic #2 should have added to it a session on docking practice preferably at a dock other than the canoe dock and thus strange to the group. This makes a new total of eighteen hours.

If another week of instruction periods is allotted the instructor should use it for review and practice in the activities where the time is needed. He will probably find that all will profit by additional training in the strokes, and a review of self rescue methods should be included. Use of carefully selected recreational activities will greatly enhance the learning

and in the most appealing way.

As soon as the term "course of instruction" is used, the thought of examinations or testing occurs to most persons. It is the author's personal opinion that testing in the sense of using a battery of tests is largely a waste of time for an activity of this type. A good instructor will know which students, if any, have not satisfactorily completed the training. In keeping with the stated objectives of the canoeing program it is unnecessary to differentiate among those who pass. It is not at all certain that it will not do harm. The instructor should keep a roll of the class. This will enable him to know which class periods a particular student missed. The information should be used by the instructor for the purpose of requiring that the individual make up what he missed. It is necessary to fail only the individual who has combined absences with an incurably uncooperative attitude. Regular attendance, diligent application, and a cooperative spirit should see any student through the course successfully. An intelligent awareness of individual differences should help the instructor appreciate that a high degree of skill can be expected from only a small percentage.

STANDARD COURSE IN CANOEING

The Beginner Course is not a prerequisite to enrollment in the Standard Course. The Beginner Course was included in this chapter to meet the problem of what to do for campers in camp for a limited time, namely three or four weeks. The Standard

Course starts at the very beginning just as the Beginner Course does, but goes on further. So far, in the teaching outlines presented in this chapter, provision has been made for the instruction of campers who may be in camp from one week, on through four weeks. No specific provision will be made for those in camp for five weeks, on the assumption that campers in camp for five weeks will almost invariably be full season campers and remain for the six, seven or eight weeks. The majority of summer camps have seasons from six to eight weeks in length. The Standard Course will therefore be set up for a camp whose season is six weeks duration. At the end of the lesson plan presentation it will be explained how to profitably utilize the remaining one or two weeks in camps of seven or eight weeks duration, in the event there is time allotment for canoeing.

As indicated in the previous sections it will be assumed that six hours per week will be allotted to canoeing. A course set up for six weeks will therefore comprise thirty six hours of instruction. On the basis that this will almost always be an hour per day arrangement, the course is presented as thirty-six lessons.

LESSON ONE

1. A ten minute talk should be given on the significance of the canoe from primitive times to the present. It is suggested that the approach used in chapter one be followed. To go into any more detail is not necessary and is time consuming. If the camp library includes books on canoeing and on American Indian

culture a suggestion may be made that anyone who wishes may read material on the history of canoeing. Time may be given at the beginning of a subsequent class to allow a couple of campers to make brief reports on their readings.

2. Explanation should be given as to why the canoes are carefully kept on racks in a shaded place and why they should be handled carefully while being carried to and from the launching place. It should be explained also why the paddles are kept on a rack and why kneeling cushions have a special storage place.

3. The instructor should demonstrate a tandem carry, and while the canoe is off the rack it should be set down on the dock or on the ground, if the latter is smooth. A brief discussion of the names of the essential parts of the canoe may be given at this point. How to select the proper length paddle should also be discussed.

4. The instructor should demonstrate and explain tandem launching methods, and then have the class carry and launch their canoes in tandem.

5. When as many canoes as the dock faces will accomodate are afloat, the instructor should have the class members sit down on the dock holding their canoes alongside. If the class is large and all canoes are not afloat, the balance of the class should stand on shore. The instructor should then demonstrate and explain how to get into and out of the canoe efficiently and safely, and put the class through a practice session on these skills. This demonstration and practice involves also the

kneeling position, on both knees. The importance of a good kneeling pad should be explained.

6. The instructor should watch the passing of time carefully to make sure that not too much of it is spent on the above things because it is important for student interest to spend a little time on the water even on the first day. A brief drill on the draw stroke and the pushover stroke should be conducted.

7. The instructor should demonstrate how to come alongside the dock and how to lift the canoe out of the water and put it back on the rack, and then have the class do this and thus end the first lesson.

LESSON TWO

1. The class should be opened with a more detailed discussion of the names of the parts of the canoe. This should involve information on the structure of the canoe in order to contribute a better understanding of why the canoe should not be abused in handling.

2. Carrying and launching should be undertaken under supervision, in fact supervision should prevail throughout the entire course, for it amounts to further teaching, and these things will not be learned well without repetition of instruction.

3. The instructor should watch the class members getting into the canoes, and require repeats for any who do it incorrectly.

4. The draw strokes and pushover stroke should be reviewed and the diagonal modifications of each added. The sweep strokes

and the reverse sweeps should be taught.

5. A hand paddling race should be staged for the fun element, and to teach stability .

6. The instructor should demonstrate and explain how the strokes practiced can be used in coming alongside the dock. The crews should be required to come along side and take the other necessary steps to get the canoes put back properly on the racks. Better performance may be expected than on the first day. The instructor should be patient and helpful, but should not tolerate carelessness.

LESSON THREE

1. The instructor should get the class afloat in their canoes, doing whatever teaching necessary in the process of checking on errors in skills.

2. Strokes previously taught should be reviewed and the bow stroke and the backwater stroke added.

3. The method of changing places in the canoe should be taught. The class should practice this several times and it should be planned that the practice session ends with the original positions changed.

4. All the strokes should be reviewed with the crew members in their new positions.

5. The "bang and go back race" may be staged.

LESSON FOUR

1. All strokes should be reviewed and crew members required to change positions in the canoes, and the review of

strokes repeated so that all will have the opportunity to practice strokes in both bow and stern positions. This also provides further training in changing positions in the canoe.

2. The self rescue procedure in the event of capsizing should be demonstrated. The class should then practice it. This should be carefully supervised, for safety, and to assure that all persons have several opportunities to go through the procedure, in order to learn it well.

LESSON FIVE

1. Strokes previously taught should be reviewed and the bow rudder stroke added. It bears repeating here that the section on Teaching Suggestions should be consulted in connection with the use of this lesson outline. It will be assumed hereafter also that practice in strokes will always involve changing positions in the canoe to assure that practice in both bow and stern positions is given to all class members.

2. The instructor should demonstrate and explain the technique of going overboard into deep water and boarding the canoe from deep water. The class should practice this under close supervision.

3. A modified version of the submarine race with hand paddling may be staged for the fun in it, and to further the learning of the skill of self rescue.

LESSON SIX

1. The instructor should shorten or eliminate the formal drill in review of strokes to allow most of the period to be

devoted to the teaching of the "J" stroke.

2. The lesson may be ended with a modified version of the "overboard race". This provides fun and a review of one of the elements of the previous lesson.

LESSON SEVEN

1. Previously taught strokes should be reviewed and the cross bow rudder added.

2. The rescue of a tired swimmer should be taught, and practiced by the class.

3. The instructor should read the discussion on the "pickup relay race", included in the chapter entitled "Recreational Canoeing". The relay aspect of it may be left out. It may be staged as a contest to give more practice in the "fun way", on the above method of rescuing a tired swimmer.

LESSON EIGHT

1. Previously taught strokes should be reviewed and the sculling stroke added.

2. The instructor should demonstrate and explain the rescue of an unconscious but floating victim, and have the class practice the same.

3. The Submarine Race may be staged as it is presented in the chapter entitled Recreational Canoeing, using single paddles.

LESSON NINE

1. Previously taught strokes should be reviewed and the reverse sculling stroke added.

2. The instructor should demonstrate and explain the technique of getting a helpless victim into a swamped canoe and getting the canoe and victim ashore. The class should practice this.

3. There will be no time left in this period for a recreational activity, but the nature of the above rescue operation is such as to eliminate the need for one.

LESSON TEN

1. Previously taught strokes should be reviewed and the stationary draw stroke added.

2. The instructor should demonstrate and explain the method of rescuing a submerged victim and getting him into the canoe. It should not be forgotten to begin artificial respiration as soon as the victim is in the canoe. It will be necessary to change the organization of crews for this operation because an extra man will be needed with each crew.

LESSON ELEVEN

1. Previously taught strokes should be reviewed and the stationary push-over stroke added.

2. The instructor should demonstrate and explain the canoe-over-canoe rescue. He should have the canoes pair off and practice the same. It should be assured that all persons participate in all elements of this operation. Repeating will be desirable to the extent that time allows.

LESSON TWELVE

1. A review of the more difficult strokes should be conducted.

2. The instructor should demonstrate and explain carefully the utilization of strokes in coming alongside the dock. He should demonstrate at all possible landing places at the dock, and from all possible angles of approach.

3. He should have the class practice landings at the dock during the remainder of the period. He should supervise from the dock and require precise control as near as possible in keeping with the development of the group. This is one of the most efficient methods of teaching the application of the strokes learned.

LESSON THIRTEEN

1. Three quarters of the period should be devoted to straight away paddling, with the emphasis on development of the "J" stroke, and on timing, that is the bowman setting a regular rhythmic stroke and the sternman timing his with it.

2. At the close of the above, a tandem "canoe-over-canoe rescue race" may be staged. The crew rescued takes over the final sprint to the finish line.

LESSON FOURTEEN

1. The group may be taken on a cruise to a previously selected smooth beach at some distance from camp. While underway the instructor should coach the members of the class in the

refinement of the "J" stroke.

2. Upon arrival at the selected beach, the instructor should demonstrate and explain how to make a proper landing on the beach and how to lift the canoe out of the water and carry it up on shore. He should have the class make landings and do as was demonstrated.

3. This will be a good time to show the group how to give protection to the ends and gunwale of the canoe, when it has to be left on the ground, when not in use. Chips of wood or pieces of dry bark may be placed under the three vulnerable places. Each crew should care for its canoe in this manner.

4. One of the campers might very well be asked to give a brief talk, at this point, on what he has been reading about canoeing, especially the historical aspect of it. This ought to be prearranged.

5. The instructor should have the crews make tandem carries to the launching place,across the point of land, if there is one, or along an established trail.

6. The instructor should demonstrate and explain launching and getting in from a shallow smooth bottomed beach, and have the crews do it. Poor performances call for a repeat. The period should be ended by cruising back to camp.

LESSON FIFTEEN

1. The first half of the period should be devoted to formation paddling. This should involve column turns and unit turns, similar to Navy ships maneuvering or men marching.

Good station keeping should be stressed, and a slow pace set so that all hands may keep up at all times.

2. The "numbered shingle race" may be staged during the balance of the period. Ingenuity should be employed in planning this, for example, at first only numbered shingles should be used, just enough for the canoes in the race. Throwing the shingles should not be allowed in the beginning. Greater degrees of difficulty may be added progressively, such as permitting throwing of shingles, and adding more and more unnumbered shingles. This activity provides fun and much practice in bringing the canoe close alongside objects.

LESSON SIXTEEN

1. The group may be taken on a cruise to a place away from camp that provides a shore line with an obstacle such as a steep banking or large rocks in near shore. While under way for this objective, the instructor should check and teach to improve performance of the "J" stroke.

2. At the objective, the instructor should demonstrate and explain landing or coming alongside, getting out and lifting the canoe out of the water under these particular circumstances. He should then have the class do these things under close observation and instruction.

3. As in lesson fourteen, a brief rest may be combined with a five minute report by a member of the class on some phase of canoeing he has read about in the camp library.

4. The instructor should demonstrate and explain the "chain carry" and have the campers transport their canoes in this manner along a trail to a launching place. This place should be determined ahead of time as part of a survey of facilities made early in the season.

5. The instructor should demonstrate launching and getting in under the conditions peculiar to the place and have the class carry on with it.

6. The group should be headed back for camp, and while underway some maneuvers should be inserted, particularly when it can be done to avoid small craft on the water and in the way.

LESSON SEVENTEEN

1. If there is a stream leading in to the lake, the instructor should take the group on a cruise up the stream and back. He should be sure to turn back at half way through the hour. If no stream is available practically the same experience can be gained on a cruise along the shore of the lake. A section of the shore should be chosen that has many overhanging trees and many inlets. This is good training in applying the strokes learned in a very realistic way. The entire period may be devoted to this. It may be that in the event a stream is available, the proper use of "drag steering" can be taught. This will only be true if there are sections of shallows.

LESSON EIGHTEEN

1. The first half of the period may be devoted to formation

paddling, using more complicated maneuvers than in earlier periods and attempting to work in all strokes, and requiring better station keeping than before.

2. During the last half of the period a practice session on coming alongside the dock from various angles may be conducted. A strange dock at a different place on the water front or a different part of the lake should be used if possible.

3. On the return to camp, an overboard race may be staged.

LESSON NINETEEN

1. On the well founded premise that the "J" stroke is most perfectly learned in single paddling, the first half of the period should be allotted to practice in single paddling. The second member of the crew may sit in the bottom just forward of midships, facing aft. He can watch the paddler perform and learn through this and by being attentive to the instruction, and will as a result do better when the change is made to give him his turn.

2. The period may be finished with a "canoe filling contest". This is largely for fun, but does provide further emphasis on elements of self-rescue. Eliminations to determine the final winner are held only if there is time available.

LESSON TWENTY

1. Prior to class, the instructor should lay out a system of buoys over a broad area of the lake, and for the first half of the period conduct practice in paddling from buoy to buoy in

the straightest line possible. This is to get the most possible out of the class in the achievement of the fine skill of holding a straight course. To maintain a straight unswerving course is about the highest demonstration of skill in the art of paddling.

2. The period may be finished with practice in coming alongside the dock at its several faces, with stern first approaches. This is not a ridiculous activity, but rather one which will test and teach what the paddle in the water does in respect to the movements of the canoe. The majority of canoeists very largely let the canoe take them for a ride, rather than having it perfectly under control at all times.

LESSON TWENTY-ONE

1. In view of the fact that the Standard Course is set up for tandem crews, the only single paddling done is that which is inserted for the purpose of increasing the effectiveness of the practice of the "J" stroke. During the first part of this period, single paddling practice should be conducted, using the system of buoys to emphasize paddling the straightest possible course.

2. The Pick Up Relay Race may be staged as it is described in the chapter on Recreational Canoeing.

LESSON TWENTY-TWO

1. The instructor should take the group on a cruise along shore, or up the stream if there is one, or in the absence of a

stream or lengthy shoreline, substitute formation paddling, setting up the latter to involve practice in all the strokes. The entire period may be devoted to this.

LESSON TWENTY THREE

1. The group should be introduced to double blade paddling. This has been held off till this lesson because double blade paddling is relatively simple compared to single blade paddling, and an early introduction of it might have discouraged some in their efforts to master the art of single blade paddling. The entire lesson may be devoted to it.

LESSON TWENTY FOUR

1. Formation paddling should be conducted with double blades, ending with docking practice so that the group will have practice in using the double blades in draw and sculling strokes to come along side the dock.

2. The period may be closed by substituting single paddles and staging the Hurry Scurry Race in tandem.

LESSON TWENTY FIVE

1. The group should be taken on a cruise, double blades, to a distant part of the lake. Good station keeping should be stressed while underway. The group should make landings and carry canoes over a trail to a launching place. A brief rest may be given at this point and another camper designated to make a five or ten minute report on some phase of canoeing about which he has been reading.

2. On the return trip formation paddling may be inserted.

LESSON TWENTY SIX

1. The group should be taken on a straight away cruise double blades in two columns. A moderate pace should be set and good station keeping stressed.

2. During the latter part of the period a combination Hurry Scurry and Pick Up race may be conducted. A life boat should patrol as a safety measure during this event. The canoes should be anchored in a straight line, parallel to, and fifty yards off shore. One member of each crew should be stationed in the water, each opposite his own canoe and fifty yards farther out into the lake. The other members of the crews should be stationed on shore in line with their respective canoes and partners in the water. On the starting signal the contestants on shore run to the water, dive or jump in and swim to their canoes, board them, pull up the anchors, and race to their respective partners in the water. There they do the rescue of a tired swimmer and turn about to race back to a finish line near shore. The first crew there wins.

LESSON TWENTY SEVEN

1. The instructor should introduce the group to the high kneeling position for paddling single blades, and go through a drill on strokes, with the class in this new kneeling position. It should be remembered that the position of both paddlers is now near midships rather than at the ends of the

canoe.

2. The period may be finished with the Overboard and Gunwale Race. It may be wise to practice a few minutes, before the event, on the standing on the gunwales phase of this contest.

LESSON TWENTY EIGHT

1. The instructor should take the group on a cruise in the high kneeling position. He should put them through some formations to take their minds off their aching muscles, which will develop from this new position.

2. This is a good time to teach the fast method of doing the Overboard Race described in the chapter on Recreational Canoeing.

LESSON TWENTY NINE

1. This may be considered a rainy day lesson. It may very well be inserted here or most anywhere in the course as the weather may dictate. Present a whole hour of information on canoe repairs of the emergency sort. If a camp canoe needs repairs, it may be repaired as part of the teaching process.

LESSON THIRTY

1. The group may be introduced to standing paddling, both single and tandem.

2. A medley race may be staged. A starting line and a finish line, which is also a turning line, should be laid out. A hundred yards between lines will be sufficient. The crews

should be lined up on the starting line. On the starting signal, they race with single paddles to the turning line, both members of each crew paddling in the kneeling position on both knees. At the turning line a quick shift is made to double bladed paddles for the next leg. These double bladed paddles will have to be the ferrule type to be assembled at the beginning of this leg and taken apart at the end of the leg. For the third leg a shift is made to single blades in the high kneeling racing position. The fourth leg is paddled in the standing position. The fifth and final leg is paddled standing on the gunwales.

LESSON THIRTY ONE

1. The instructor should conduct a review of the method of going overboard into deep water and boarding the canoe from deep water. He should see that all persons go over board in the proper manner and board both in tandem and alone; that is to assure that every person is able to board the canoe entirely alone and unaided by his partners steadying hand on the opposite gunwale. The instructor may show the use of the bow line for the purpose of taking a swim.

2. The method of getting unconscious victim into a swamped canoe should be practiced and elaborated upon for the provision that the victim is not breathing. In other words the victim should be brought into the canoe and artificial respiration begun, alternated with hand paddling strokes to get the craft into shore.

LESSON THIRTY TWO

1. The technique of rescuing a submerged victim should be practiced.

2. The balance of the period may be devoted to stern first approaches to the dock.

LESSON THIRTY THREE

1. A drill in the canoe-over-canoe rescue should be conducted requiring good performance.

2. The group should devote the remainder of the period to straight course paddling utilizing the system of buoys to assure guides to control and promote the best performance.

LESSON THIRTY FOUR

1. The group should be organized for a Dipper Race.

2. The period may be closed with the numbered shingle race.

LESSON THIRTY FIVE

1. This period should be devoted to activities selected either on the basis of known weak spots, or on the basis of activities desired by the class members.

LESSON THIRTY SIX

1. This period should be based entirely on what the class wishes to do.

The periods during the last week of the six weeks program could very well be omitted, providing it is possible to sub-

stitute for them a two day over night canoe trip, or two all day canoe trips. It will be noted that the content of these final lessons is of the review nature to provide further training in the things already learned. The canoe trip substitute is much to be preferred for it provides on a sustained basis a realistic application of much of what has been learned in the class work.

SUGGESTIONS FOR SEVEN OR EIGHT WEEKS CAMPERS

1. The first six weeks should be devoted to the lesson plans as outlined for six week campers.

2. The seventh week may profitably be devoted to a well planned canoe trip as suggested above for an alternative to the sixth week in the case of six weeks campers. The additional week might allow more careful planning and therefore a more extended trip. In camps that stress the teaching of outdoor cooking and sleeping under the stars, this canoe trip may be welcomed as an opportunity to apply not only the training in canoeing, but that of other camp programs. This trip should have the combined cooperation and planning efforts of all staff involved on the above basis. One member of the staff should plan the proper amount of food and its distribution in the various canoes. Another should see that the campers going on the trip take the proper amount and kind of clothing and bedding and eating gear. Cooking utensils and their transportation should be planned for. The canoeing instructor should know the route to be followed and have previously selected the

camping places. It should be decided ahead of time whether the canoes are to be used as shelters or if tents are to be used. Since the crews are to be tandem, the use of canoes for shelters is discouraged. A canoe does not provide adequate shelter for more than one person and even for one person the problem of protection from insects indicates that a tent is the wise thing. It is important to provide coverage by the camp physician, either by visitation at the night encampments or by some method that will work out according to the existing circumstances. Since this is not a book on camp craft further features will not be discussed. If a canoe trip is not possible the plan suggested below for the eighth week may be followed.

3. The eighth week if devoted in any way to canoeing may follow the plan of special practice in selected formations and stunts with the objective of building finesse in their execution preparatory to staging a demonstration for the visitors who will come to camp on the closing day.

TESTING

As indicated elsewhere in this chapter, it is not considered necessary to conduct a series of tests. Each camper should be judged on the basis of individual progress and development rather than on a comparative basis with other individuals. Regular attendance, with make up of work missed, should qualify any individual for recognition of satisfactory completion of the course. The instructor's subjective judgment is the most reliable in a course of this type. He will have given extra help to the

weak members during the season, to bring them along to satisfactory performance. He will also know if weak performance is due to refractory attitude and if so, will fail the individual only after efforts to change the attitude have failed.

ADVANCED COURSE IN CANOEING

It is not considered necessary nor desirable to present the Advanced Course on the basis of specified lessons as was done with the Standard Course. It is expected, however, that the plan used for the Standard Course will be of suggestive value to the instructor who is making up his lesson plans for the presentation of the Advanced Course. The Advanced Course differs essentially from the Standard Course in that it emphasizes mastery of canoe handling in singles rather than in tandem, and goes on into more difficult activities.

In organizing into lessons the course content listed below, the pattern set up for the Standard Course should be followed in so far as possible. The course should begin with simple activities and progress to the more difficult as the season goes on. Recreational activities should be combined with the more formal instruction to keep the interest at a high level. Most persons learn more easily when they are having fun doing it. The lesson plan type of presentation is not being followed because it will not allow for the broad individual differences which will show up among the members of the group in view of their having had, during the previous season, the Standard Course.

The exceptional members of the class will be ready for a lot of free practice on difficult things they wish to master. They will have gone through the easier things much more quickly than the bulk of the class. The instructor must expect this development and plan for it. Some may be turned loose for free practice, but under overall supervision. They should not be held back by the slower learners. Other exceptional students may wish to help the instructor by giving individual instruction to those needing it. This is a good plan to follow to provide the best attention possible for the very slowest learners.

The below outline should be used as a guide to assure that nothing of importance is omitted from the course.

GENERAL HISTORICAL OR BACKGROUND INFORMATION

1. The information in the first chapter of this book may be used.

2. Volunteers from the class may be assigned to report on readings from canoeing books in the camp library.

3. If the instructor's own background includes interesting experiences such as long canoe trips, a few anecdotes may be selected for relating.

4. This part of the course should be spread over the early part of the season and not crammed into the first few lessons. The young people will be interested in talk in small doses but not if it cuts seriously into activity.

CARE OF EQUIPMENT

1. This training should be spread over the entire season.

2. The Advanced group may be given the responsibility for keeping the canoe area in good order.

3. The nomenclature of the canoe parts, its structure, its use and its limitations in use, should be taught.

4. The instructor may go into some detail on repair methods, and assure that all members of the class know why racks are provided and how they are constructed.

5. If the instructor knows how to recanvas a canoe and one of the camp canoes needs recanvassing it would be good experience for this class to observe and assist in the project. The same thing pertains to any repair and repainting job that has to be done. It is not only desirable to add to the experience of the group in this way, but participation in these activities increases their appreciation of the canoe, and the care with which they handle it.

CARRYING AND LAUNCHING

1. All methods of carrying and launching, including methods of lifting the canoe out of the water should be taught. For well grown boys emphasis should be on one man carrying and launching providing the canoes are fifteen foot models. If the canoes are over fifteen feet long, one-man carrying and launching should not be allowed except for boys who have achieved near full adult growth.

2. This information and practice should be taught as incidental in connection with other activities but no careless methods should be permitted.

PERSONAL SAFETY

1. Correct methods of boarding the canoe from dock, beach, banking, or alongshore rock should be insisted upon throughout the course and the same in respect to getting out of the canoe.

2. The various kneeling positions should be taught.
   a. Cruising position on two knees.
   b. Cruising position on one knee, with the other knee extended for relief.
   c. The high kneeling or racing position.
   d. The standing position.

3. The method of changing paddling positions while afloat should be included. Though this was learned thoroughly in the Standard Course, and pertains to tandem paddling, it should still be reviewed in this course.

SELF RESCUE

1. The method of going over board from the canoe into deep water, with good form and correct execution.

2. The correct method of boarding the canoe from deep water. The slow method and the quick method should be taught, and good form stressed.

3. Righting a capsized canoe, boarding it and propelling it to shallow water with hand paddling and with paddle.

4. Emptying the swamped canoe in shallow water, on the banking, and over a dock.

5. Emptying the canoe by the "shakeout" method.

RESCUE OF OTHERS

1. Rescue of a tired swimmer.

2. Rescue of a floating but helpless victim, conscious or unconscious. Artificial respiration should be included, for the victim who has ceased breathing. Hand paddling alternated with artificial respiration should be added for training to meet the situation where no help is available, and getting back to shore is indicated as necessary.

3. Rescue of a submerged victim with use of the bowline attached to the rescuer's ankle. Note that the steps in #2 above would all be applicable to this rescue when it is carried through to completion.

4. The method of getting a helpless victim into a swamped canoe, including the giving of artificial respiration, and hand paddling back to shore.

5. The canoe-over-canoe rescue.

6. The canoe-over-canoe rescue when both canoes are capsized.

PADDLING STROKES

1. Some of the strokes included in the Standard Course will not be reviewed here, but if the instructor wishes to include them such is his prerogative. It should be kept in mind that the strokes listed below are essentially for one man paddling. The bow stroke will be called the crew stroke in this course

and included because it is basic and should be refined during the part of the course given over to racing practice.

2. The following strokes should be taught:

Crew stroke	Draw stroke
"J" stroke	Pushover stroke
Reverse "J" stroke	Sculling stroke
Sweep strokes	Reverse Sculling stroke
Reverse sweeps	Stationary draw
Silent paddling	Stationary pushover
Stern rudder	

3. All single blade strokes should be taught in the regular cruising position and in the racing position.

4. Double blade paddling.

RECREATIONAL ACTIVITIES

1. The instructor may repeat as many of those in the Standard Course as desired.

2. He should add the following:

Tail end race	Rescue race
Hurry-scurry race	Gunwale race
Overboard race (from the high kneeling position)	Hand paddle race
Upset race	Canoe emptying contest
Tilting	Broom race
Standing race	Kangaroo race
Canoe-over-canoe rescue race	Submarine race
Pick up relay race	Overboard and gunwale race
Pyramid	Backwards race
Eskimo roll with single paddle	Eskimo roll with hands
Surface dive eskimo roll	Eskimo roll with the shift
War canoe shake out	Formation paddling to music
Submarine roll race	

The activities listed above that have been included in the Standard Course should be staged as indicated in the chapter on Recreational Canoeing. All Activities should be presented thus

unless it is desired to adapt them to individual participation. Some of the difficult activities should not be considered as required, especially those involving the "shakeout" and the eskimo roll. Certain members of the class will take to these activities readily, however, and they should be offered to them.

3. These activities should be presented for the fun in them, but always with the object in mind that they help the whole process of training the campers to be good canoeists.

CANOE RACING

1. The group should be trained to do a creditable job in canoe racing with both single and double blades in the following events: Singles, Tandems, and Fours.

2. If it is so desired these events can be set up in the junior, intermediate, and senior classes as indicated in the chapter on Canoe Racing.

CANOE TRIPS OR CRUISES

1. If it is at all possible to arrange for canoe trips, the Advanced group should be provided with this opportunity on as extended a basis as practicable. It may be possible to combine this trip with field work in wild life study, and training in campcraft of the more rustic and self sustaining sort.

DEMONSTRATIONS

1. If it is the custom in camp to stage aquatic shows for

visitors on Sunday afternoons, the group or certain members of it may be trained to put on interesting stunts. There are many activities that are very appropriate for this.

SUGGESTIONS ON TEACHING

THEORY

1. As much of it as possible should be saved for rainy days.

2. That which must be introduced into class work primarily devoted to practical activities should be administered in small amounts stripped down to essentials rather than amplified with a lot of words.

3. Regarding theory as of no value should be avoided. It should be given its proper weight, but the fact should be likewise kept in mind that it is of more importance for the youngster to learn well how to handle the canoe than to become conversant about its cultural and anthropological significance, and what famous man paddled what famous canoe down what famous river.

4. Reading books on canoeing may be encouraged but no special evaluation significance placed on this accomplishment. Canoe handling is learned by doing not by reading. Most of the greatest canoemen never read books on the subject. They learned by diligent application and the teaching of someone skilled in the art.

THE HANDCRAFT PHASE

1. It should be kept in mind that the task is to teach the young people how to handle the canoe rather than how to build

it. If a lot of time is allotted to canoeing, the group may be given considerable information and training on the nature of construction, emergency repairs, permanent repairs, recanvassing, rack construction, et cetera. If a minimum of time is allotted, this may be cut down to the bare essentials or eliminated entirely. There are many craftsmen who can do fine work on canoes; our task is to develop more skill in the handling of them.

2. What ever is done in this line should be done on rainy days indoors, or realistically as the need for these things develops, for example, if a canoe is damaged, it should be repaired with the class watching.

ON GETTING AFLOAT

1. Learning to lift the canoe off and on the rack, and to carry it and launch it and lift it out of the water are skills that will develop as the season progresses. Special drills in these things are not as a rule advisable. Supervision of the group at all times will assure the necessary care of equipment and safety for the individuals. Finesse will build up because these things have to be done at the beginning and end of each class period, thus being repeated many times and consequently eliminating the need for drills.

2. During the normal progress of the course it should be seen that all campers launch at the various faces of the dock and under the varying natural situations indicated in the course content, so that they will learn to apply principles to

changed situations.

3. Getting in to and out of the canoe may become a little slip-shod as familiarity and ease develop. The elimination of step by step deliberation is permissible and even desirable, but adherence to the basic principle should be required throughout the entire season, so that it will become a firmly established pattern.

TEACHING THE STROKES

1. So called "dry-land drill", usually conducted with the class members standing in shallow water or kneeling on the dock's edge, is not considered by the author as justifying the time it takes, with the exception that such a drill for the "J" stroke may be advisable. It is wisest to teach the strokes afloat, so that the individual gets the feel of what a movement of his paddle does to the canoe, even from the very first time he dips his paddle in the water.

2. It will be noted that the lessons were set up to teach first the strokes involved in moving the canoe sideways and about in varying arcs of circles, in either direction. Most persons who learn first to paddle the canoe ahead are satisfied with being able to get it underway on a reasonably straight course and for ever afterward they are largely taken for a ride in the canoe having very little control over it, rather than having it always under control and taking it precisely where they want it to go. Starting with the above method will go a long way

toward eliminating this tendency.

3. For the practice of strokes designed to move the canoe sideward, or turn it about, the class should be organized with the canoes line abreast and with about twenty feet of open water between canoes. After demonstrations the class should simultaneously work on a specific stroke in order to keep the same relative stations. The strokes to which this applies are the following: Draw strokes, pushover strokes, sweep strokes, reverse sweeps, sculling stroke, reverse sculling stroke.

4. For the practice of the strokes designed to move the canoe ahead the class should be organized with the canoes in one or more columns. These strokes are the bow stroke and the "J" stroke. Practice of the backwater stroke may be conducted in either of the above formations. This is true also for the reverse "J" stroke.

5. The strokes involved in emergency movements, namely the bow rudder, the cross bow rudder, the stationary draw, and the stationary pushover may be practiced in formation, or perhaps better out of formation and on an individual basis.

6. It is expedient, in teaching both the draw strokes and the push over strokes, to initially have both the bowman and sternman paddling on the same side of the canoe. In this way both will be doing all the same movements and thus make the teaching process easier. All crews should likewise paddle on the same side so that as the canoes move sideward on the water, they will all move in the same direction and avoid confusion in

addition to making it easier for the instructor to check their performance. When both of these strokes have been fairly well learned the crews may be set up properly with the bowmen paddling on one side and the sternmen on the other. They will now be ready to coordinate the draw and pushover strokes. In other words the practice of moving the canoes sideward on the water continues but with the two strokes being used together, one by the bowmen and the other by the sternmen. Exactly the same pertains to the sculling and reverse sculling strokes.

7. Once the basic patterns of strokes have been learned in the drills, as much realistic activity as possible should be resorted to as is indicated in the lesson plans in this chapter. It will be necessary to have a strong voice and to employ sharp commands to carry out good maneuvers in formation paddling. What ever system of commands is used should have two parts; the command for preparation, and the command for execution. This is to allow everyone time to get in mind what is to be done, and to assure that it is done by all crews simultaneously. The following works well: "Standby for a ninety degree turn to starboard"--interval--"Execute".

8. To mass the canoes afloat for the purpose of a demonstration and explanation of a skill or group of skills, the line abreast formation may be simply compressed till all canoes are gunwale to gunwale, still line abreast. The canoeists will hold the canoes together without much urging for this gives them a chance to sit down to rest their knees. It

should be required that they sit in the bottom, however, and not on the seats or thwarts. The crews in the outboard canoes may be instructed to keep their paddles in the water for the purpose of preventing the breeze from blowing the formation about, or out of position to too great a degree.

9. If the canoes are of varying sizes and weight, it will ordinarily end up that the smallest and weakest individuals will get the largest and heaviest canoes, if the selection of canoes is not supervised. This handicaps them in every way, particularly in paddling when the breeze is a bit stiff. Control should exist in this so that the opposite condition will prevail.

10. In the chapter on stroke description and analysis it is indicated that the bent upper arm method of paddling is preferred as the most efficient. It is, however, not of wisdom to insist that this method be used exclusively. Many skilled paddlers use the straight upper arm method or a compromise between the two. The majority of canoe racing champions have employed the bent upper arm method, but on the other hand some notable few have used the straight upper arm method. It is the result more than the method that is important. It profits little to be arbitrary on these things.

PERSONAL SAFETY

1. It is often urged that seats be immediately taken out of canoes and thwarts put in in their place. This is a good plan, providing the time and the skill are available.

Quite often, however, the seats are taken out, and a poor job of replacement with thwarts is done, and the canoe as a result suffers structural harm. In this latter case it would be better to leave the seats in and educate all hands to ignore them as seats, and consider, and use them, merely as thwarts bracing the canoe. Canoes that the campers encounter at other places than camp will probably have seats in them and this educational method may have the desired carry over. When canoes are being ordered from the manufacturer, however, thwarts rather than seats should be requested. In any event sitting on seats should not be permitted in camp by either campers or members of the staff. Some adults who have been canoeing for years and sitting on the seats will maintain that doing so is more comfortable than kneeling. There may be such persons on the staff at camp. They may further maintain that they have never capsized and sitting on the seats is all right if the individual has been taught to be at home in the canoe. On the surface this argument seems good, for a trained canoeist would be very unlikely to capsize even standing on the gunwales. It must be remembered, however, that those who get into trouble are not trained canoeists, but may be influenced by what they see trained canoeists do, and for the untrained sitting on the seats is dangerous. The person who in spite of years of paddling canoes, still uses the seats is not a skilled canoeist, though he may not realize it. His opinion is therefore not authoritative. A canoe

cannot be handled skillfully from the seats, and the person who thinks it can has never been exposed to skillful canoe handling. Now in the light of common sense it cannot be said that the seats or thwarts should never be sat upon. For educational reasons they should not, in camp, but some skilled canoeists sit on them while out fishing, and do so with safety on quiet water. When the fishing is done they get off them to resume paddling from a suitable position. In camp whenever a rest from the kneeling position is indicated the sitting position should be in the bottom and not on the seats.

2. In teaching the technique for changing positions in the canoe, while afloat, a careful demonstration should be given with the canoes in a circle or arc of a circle around the demonstrating canoe. The practice should be in unison at the commands of the instructor. All crews should be instructed to move only on specific direction. The first command, for example would be, "Bowmen, stow your paddles". On this command the paddles would be stored simultaneously. The instructor should hold up his next command until his sweeping eyes observe that the order has been carried out correctly by all. Step by step in this manner the operation is accomplished and correctly. Several repetitions are desirable. After this is learned the crews will be allowed to do it independently, as will be necessary many times during the course.

SELF RESCUE

1. In conducting practice in going overboard and getting back into the canoe, it is wisest not to have all hands go over board at the same time. To do so prevents observation of how correctly it is done by all, and in addition it is not perfectly safe to have all hands take to the water at the same time, just in the event that the rare unexpected should happen. One crew at a time should be set off and watched closely.

2. In the practice of boarding a swamped canoe it is not wise to have all canoes swamped at the same time. At least a half of them should be afloat on the surface at all times.

RESCUE OF OTHERS

1. Since the nature of these activities, as well as those above, necessitates taking plenty of time and care, it is best to conduct them on warm sunny days. Wet bodies in a cool breeze are very unpleasant, and if occurring too often may dampen interest in the whole program of instruction, for at least the more delicate members of the group.

2. Practice of these activities should embody the same precautions as indicated for the self rescue methods.

OTHER SUGGESTIONS

1. The instructor must practice what he preaches in order to set a good example in conformity with the demands he makes of his classes. He should be firm in insisting that

all staff members adhere to rules, or he will not be able to enforce them amoung the campers, except by the use of unpleasant methods which should never have to prevail in a well conducted program.

2. The instructor should recognize excellence as it develops on the part of a camper. Extra attention should be given such a person if he requests it, out of class time. He may make a fine assistant for the next season, or a successor when the instructor moves on.

CHAPTER TEN

INFORMAL CANOE RACING PROGRAM

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INFORMAL CANOE RACING PROGRAM

Although the information in this chapter is presented as an aid to the development of an informal canoe racing program especially for summer camp use, its content springs out of many years of experience in formal canoe racing in regattas sanctioned and promoted by the American Canoe Association. Much of the technical aspect of it is the same as pertains to the formal type of racing in specially designed canoes. For this reason it is considered proper and of value to undertake at this point a brief summary of the formal type of racing before going on with the recommendations for a camp program of canoe racing.

The American Canoe Association was organized in 1880 and since 1882 has yearly published a year book which has included information on cruising activities, sailing, and canoe racing engaged in by its members throughout the previous year. The canoe racing activities are staged in the form of regattas sponsored by canoe clubs generally, and in specific cases by the American Canoe Association, but in all cases sanctioned by the American Canoe Association. Each year there are regattas held to determine divisional champions in the various races, and a national regatta to determine national champions. During Olympic years, an Olympic team is selected by a process

of elimination on a national basis. The regattas consist of the following races conducted over a two day period, on a week end, and usually in the order listed:

First Day	Second Day
Junior One Man, Single Blade	Junior One Man, Double Blade
Intermediate One Man, Single	Intermediate One Man, Double
Senior One Man, Single	Senior One Man, Double
Junior Tandem, Double Blade	Junior Tandem, Single Blade
Intermediate Tandem, Double	Intermediate Tandem, Single
Senior Tandem, Double	Senior Tandem, Single
Junior Fours, Single Blade	Junior Fours, Double Blade
Intermediate Fours, Single	Intermediate Fours, Double
Senior Fours, Single	Senior Fours, Double
	Nine Man War Canoe Race (generally only in the Eastern Division)

The war canoe race is over a one mile course, and the other races are usually staged on a one half mile course. The American Canoe Association has prescribed rules and regulations also standardized by rules laid down for their measurements.[1]

This gives a brief picture of the organization of formal racing. For more information The Year Books may be consulted and the other publications listed in the bibliography.[2] The main subject of this chapter must now be considered.

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1. See Racing Rules and Regulations, a pamphlet published by the American Canoe Association.

2. Since the American Canoe Association has no permanent address the best contact for information on availability of literature is The American Canoeist, a periodical, 230 Park Avenue, New York City.

INTRODUCTION

It must be kept in mind that canoe racing as indicated above is for physically mature individuals and should not be undertaken on the same basis for adolescents. One eighth mile or less courses are recommended as sufficient and safe. Training for races should not be undertaken on the professional plane. In fact, it is doubted that specific training to develop the most speed is desirable. Training to develop efficiency, and to improve skills and techniques involved in racing should be the objective.

TYPES OF RACES

Any or all of the races enumerated as standard in A. C. A. regattas may be used. This will depend upon the available equipment. If the camp has an assortment of sizes amoung their canoes, the smaller ones may be used for one-man and tandem crews, and the larger ones for the fours. Both single and double blade races may be conducted if the latter type paddles are available.

THE RACING COURSE

The starting line and the finishing line should be laid out parallel to each other and of equal length. With its sides, the course should be a rectangle, so that all contestants will have the same distance to paddle from starting line to finish line. Approximately two hundred yards should be sufficient distance between starting and finishing lines. In consideration of spectator interest the racing course

should be parallel to the shore line at the waterfront, with the finish line even with one end of the swimming waterfront docks, so that spectators may see the whole race from start to finish.

THE RACING POSITION FOR SINGLE BLADE PADDLING

1. This position is on one knee and the opposite foot, essentially, and the body is erect and facing slightly toward the paddling side, rather than directly forward.

2. In more detail these are the factors of importance in this style of paddling: A good firm kneeling cushion is placed in the bottom of the canoe at the paddling position. Assuming in this case that the man is going to paddle on the left side, he kneels on the cushion with his left knee. His thigh and trunk are erect above his knee. This straight line from knee through hip, through shoulder is not vertical, but almost so, probably slanting forward about ten degrees. His left leg below the knee extends diagonally across the canoe with the planter surfaces of the toes gripping the bottom of the canoe between two ribs. The right leg is extended forward with only a slight bend at the knee. The foot is placed firmly on the ribs of the canoe with the toes pointing not directly ahead, but diagonally toward the left. The right foot also is placed comfortably more to the right in the canoe than is the left knee. This gives a firm triangular base on the left knee, the left toes, and the right foot. Pointing the toes of the right foot diagonally across the canoe rotates

the right leg, partially locking the right knee, and thus reducing to a minimum any hinge action at the knee. This lessens undesirable body motion and promotes smoother paddling.

RACING POSITIONS FOR DOUBLE BLADE PADDLING

1. There is essentially no difference from normal double blade paddling. If seats are available, they will provide the superior position from which to paddle with double blades. Good foot bracing is important. If seats of the kind mentioned in chapter four are not available paddling on both knees in the normal cruising position will be satisfactory. In both cases spoon blades are indicated.

2. If there are no spoon blades in camp, but there are straight double blades, the racing position for single blade paddling may be used. It is the most efficient position from which to paddle with straight double blades, that is in terms of speed. It is very tiring, however, and its use not particularly encouraged. If this position is used for double blade racing, the forward foot should be moved farther over to its own side and the trunk turned to face squarely forward to accommodate paddling on both sides.

SETTING UP THE CANOE

1. As nearly as possible a crew should be set up so that its craft is on even keel and without list. In other words it should draw the same amount of water fore and aft and have the same amount of freeboard on each side. This is particularly true of tandem and fours crews, and for one man

double blade crews. In the case of one man single blade paddling some list will be necessary. The paddler will have to reach a compromise in the sence that he must be near enough to the gunwale on his paddling side to be able to paddle most efficiently in terms of power application and control of the canoe, and at the same time avoid a list of such degree that the advantage of the canoes natural fast lines is lost.

2. In setting up a single blade tandem crew the bow man and the stern man do not paddle from the usual positions at the ends of the canoe. They are nearer midships. The bowman kneels between the midships and the bow thwarts, and the sternman kneels between the midships and the stern thwarts. They must not, however, be so close together that the sternman will strike the shoulder of the bowman when paddling.

3. The latter recommendation also pertains to setting up single blade fours. Careful planning of the available space in the canoe is important, considering that the regulation racing canoe for fours is twenty feet long rather than of the shorter lengths used in camp.

4. It is probable that double blade racing for fours will not be practicable due to insufficient length of available canoes.

5. The 26 foot war canoe found in some camps may be set up with a nine man crew. A small platform type of block for each paddling position will be necessary to raise the cushions high enough to allow the paddlers to work efficiently over the side of the canoe.

ON THE STARTING LINE

1. The starter locates himself at one end of the line, in such position that he can sight across to the buoy at the other end of the line. He starts the race when all canoes are approximately on the line and none underway, even slightly, and the extreme bow or stem of none over the line. He should furthermore direct that the canoes spread out on the line so that none will be crowded at the start. A gun is the best starting signal, but a whistle, or the word "go" will be satisfactory.

2. A crew should take position on the line as selected or as assigned. The extreme bow of the canoe should be kept on the starting line; never over the line, and never too far back of the line. The danger of allowing the canoe to run over the line is that the starter will order the crew back, and often fire the gun as soon as the canoe is back in position. This is the starter's right but it puts the crew at a disadvantage because the craft will still have way on astern, and therefore get off to a bad start. The disadvantage of being too far back of the line is that the starter may start the race sooner than anticipated and catch the crew a boat length behind at the start. This will almost assure losing the race if the competition is good. Starting line strategy is a combination of cooperating with the starter, attempting to anticipate him, and attempting to fool him. There is nothing wrong about this. It is part of the game. Some canoe racing

men operate as follows. They keep their canoe back of the line about two feet. This looks fine to the starter. It is not far enough back to make him anticipate a flying start which is illegal. The starter will for a while be busy ordering crews into position. As he begins to be satisfied with positions he will become quiet. This signal plus the observation of the positions of the crews will indicate that the gun is about to go off. At this time the experienced crew will get life in its craft, that is ease it ahead gently. This must be well timed. If started too soon, the craft will run over the line before the gun goes off and spoil the start. With life in the craft when the race begins, it will get off to a fast start. Often in the case of an inexperienced starter, the starting signal will be telegraphed ahead of time. The crew that is alert to this may get in one stroke before the gun goes off, and one stroke sometimes wins a race. The signs to look for are characteristic movements of the arm or hand, or a turning of the head. Some starters may even close or squint their eyes as they start to press the trigger.

3. In singles (one man) the control of the craft and the necessary alertness is entirely up to the individual. He is on his own. In a one man single blade race, the canoe should not be pointed directly toward the finish line when on the starting line. Its bow should be headed off toward the paddling side about thirty degrees. This is because the

first three or four strokes required to get it rapidly underway will be fast ones with no steering, and will consequently throw the canoe over as much as the allowed thirty degrees, before the steering begins. This will not be a consideration in the one man double blade race, because the strokes alternate on both sides.

4. In tandem crews the task of keeping the craft on the line and ready to go is primarily that of the sternman, and only secondarily that of the bowman. The latter's task is to watch the starter to be sure that his crew gets the best possible start. The sternman shares in this concern and does as much watching as he is able. The canoe is pointed directly toward the finish line.

5. In fours, the sternman is the boss. He is in command. It is his task to keep the craft on the line. Usually he will ask the help of number three man, if it is needed. The stroke and number two man keep their eyes on the starter in order to get the best start possible. The canoe is headed directly toward the finish line.

UNDERWAY

1. In the case of single blade racing, when the gun goes off, stroking begins rapidly. The first stroke is a long strong pull, followed by a very rapid recovery. The next half a dozen or so strokes are taken as rapidly as possible and are consequently shortened. The speed of stroking is

progressively built up during these initial strokes and then the strokes are lengthened out into long steady pulls. It is attempted, however, to maintain a rapid recovery throughcut the race. The paddler must try to maintain good form, striving always to reach forward for a long pull, cutting the stroke off at the hip each time, minimizing body motion, maintaining a rapid but relaxed recovery, keeping in perfect timing with the paddler in the stroke position. As the finish line is approached a spurt is expected. This spurt will be very obvious in the case of a poorly trained and coached crew, for the paddlers will break out of their steady smooth form and "dig" for the finish line. Their craft already moving nearly as fast as it is possible for them to paddle it, will pick up speed only a little, if any, for the roughness of their paddling, and its accompanying excessive body motion, will most always bounce the canoe along and consequently inhibit the maximum attainment of speed. The only occasions when rough paddlers with inefficient form come through for a win is when they have been paddling a long time together and have mastered timing so perfectly that they are truly "in stroke". To the untrained eye paddling in stroke is a thing accomplished when the members of a crew are observed to put their paddles into the water and take them out of the water at the same time. This of course is absolutely necessary, but there is more to it. The members of the crew must have the same style of paddling so that the length of stroke will be the same for

all, so that the power application comes at the same time for all, rather than at the beginning of the stroke for one, at the end of the stroke for another, or anywhere between for a third, or steadily from start to finish for a fourth. The spurt for the finish line by the trained crew will not have the inhibiting factors above indicated. It will be effected simply by increasing the tempo of the recovery and maintaining the same smooth unbroken stroke. To the unskilled eye this crew will appear to move out ahead without seeming to be trying hard, where in reality they may be exerting all their energy.

2. The principles indicated above for single blade racing apply to double blade racing.

3. Maintaining a perfectly straight course from start to finish is very important. A straight line is the shortest distance between two points. To any one who has raced canoes the truth of this statement is vivid. The best way to assure that a straight line will be paddled is to select an object in the distance beyond the finish line and to stubbornly insist that the eyes stay fixed on it throughout the race. The course should be set for that object and kept on it from the start to the finish of the race. In tandems and fours only the sternmen need do this, for keeping a straight course is their task. When weather conditions are such as to make a straight course rather difficult, the number three man should

also aid in keeping a straight course throughout the race. At other times he helps with the steering only when so directed by the sternman. In extremely bad conditions of wind or waves this dual control to maintain a straight course will be necessary also for tandem crews.

THE REFEREE

1. The referee should locate himself back of the starting line, before the start of the race, or if he is also acting as starter, he should move over astern of the racing craft after he has started the race. From this position he can watch the racing crews. It is inevitable that some will get out of their own water because they have not kept to a straight course. If in so doing they do not interfere with another crews chances of winning, the referee should overlook it. If however the craft off its course strikes another, or causes another to strike it, or causes another to slow up to avoid striking it, or, coming very close across the others bow, throws a handicapping wash, then such craft off its course should be ruled out of the race. A large megaphone will help the referee so announce immediately. The referee's decision should not be altered.

JUDGES

1. Judging is the same as for any race on land or water.

TIMING

1. Timing may be done if desired. It may add interest and importance to the races. Timing canoe races, however, is

largely of little value, even in formal official races. Very few canoe racing men are able to tell anything about their times when asked. This is because time is no indication of performance, in view of the fact that every racing course is different in terms of depth of water, smoothness of water, direction of wind, and very often accuracy in measurement of the standard length course. Conditions, in fact, vary so much from day to day on the same course that local times are of little importance. It is not rare that conditions have changed so in the space of an hour that the times for the junior races have been faster than those for the senior races in the same regatta.

CHAPTER ELEVEN

ADAPTATIONS FOR THE PHYSICALLY HANDICAPPED

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ADAPTATIONS FOR THE PHYSICALLY HANDICAPPED

Modern physical educations' objectives, like those of education in general, aim at the total development of the individual, rather than the development of only sweat and muscles. Irwin[1] enumerates them as follows: (1) physical development, (2) social development, (3) emotional development, (4) recreational development, (5) intellectual development. In keeping with these objectives, physical education for the atypical has in recent years followed the direction of Adapted Sports[2].

For the achievement of the above objectives, a sports program is of even more importance for the handicapped than for the normal. Psychologists state that social and emotional development are impeded by consciousness of physical inferiority, and that frustrations are consequently built up that interfere with optimal development along all lines. Furthermore, in our present type of civilization, where recreational development is important to good mental hygiene for all persons, it may be said that the acquisition of a stock of recreational skills is imperative for the handicapped individual who will need com-

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[1] Leslie W. Irwin, The Curriculum in Health and Physical Education. St. Louis: The C.V. Mosby Company, 1944. Chapter III.

[2] See Stafford, George T., Sports For The Handicapped. New York: Prentice-Hall Inc., 1939.

pensatory activities throughout his life, not only for his physical health, but for his mental health as well.

Canoeing offers great possibilities for development as an adapted sport. An entire book might very well be devoted to the subject. It would be a good project in research and experimentation for a person who has a thorough knowledge of canoeing, as well as possessing training in physical education and a knowledge of what has been done in the field of Adapted Sports. In this chapter, only the surface will be touched. The premise will be that as much activity as the individual's handicap will permit, will be good for him.

Since there are all manner of handicaps, ranging from the most minor to the most severe, it may be suggested as a start that whenever possible the individual should be introduced to the activity in the same manner as the normal person. Missing fingers or toes, for example, might not seriously handicap the individual in this activity. A person with one missing lower leg could get along as well as the normal person in nearly all activities in canoeing.

If an entire lower limb were missing, single blade paddling would be practically out of the question, except by utilizing a seat. Double blade paddling would be entirely possible in the seated position, and conceivably such a person , in this type of paddling, might be a very worthy opponent in a race, after he had mastered the art. His decreased weight would provide less water displacement, and consequently contribute to

more speed.

Missing upper limbs, or parts, will nearly always require mechanical improvizations. In some cases, however, a handicap may be partially overcome, without special equipment. It may be helpful at this point to state the case of a young man with a missing left forearm. His forearm had been cut off very close to the elbow. There was, however, a small stub of it remaining, not more than an inch long. This stub was, in fact, so short that in other activities it was rarely used. The muscles of the upper arm had consequently become atrophied to a considerable extent, through disuse. In twenty hours of canoeing instruction and practice, this young man learned to do well everything that the unhandicapped members of the class accomplished. All that was required to achieve this was for the instructor to supplement the man's indomitable spirit with a little more than the ordinary amount of personal attention. Some experimentation was necessary.

It was found that the man's one hand should hold the paddle by the grip and not by the shaft. The reasons for this will become apparent as his methods of accomplishing the various strokes are discussed. For the draw stroke, he placed the outside of his arm against the shaft of the paddle and lifted it out to the starting position for the draw. Its position in the water was controlled by his hand on the grip. He then placed the inside of his arm against the shaft and applied the pressure necessary to complete the draw stroke. The push-

over stroke involved approximately the opposite movements, as may be visualized, but it was found that he could do this stroke very easily by using the gunwale for leverage, and thus placing nearly the whole load on his good arm. His shortened arm merely held the paddle shaft against the gunwale. He learned to do the "J" stroke more quickly than the unhandicapped members of the class, probably because it was not necessary to teach him the importance of the action of the hand on the grip of the paddle. With his shortened arm he lifted and pushed against the shaft of the paddle to get it forward to the starting position. He then hooked the little one inch stub onto the shaft of the paddle for the pull. The paddle was controlled by his hand on the grip. The gunwale of the canoe was used a little more than is usual for leverage during the steering portion of the stroke. With similar modifications he was able to do all the strokes given to the class.

This man was likewise able to master all the self rescue techniques that were taught. If time had been available, it is believed that he could have learned the shakeout. This was not part of the course content.

The accomplishments of this young man were amazing, probably even to himself. Once he began to get activity for the unused muscles of his left arm and shoulder, he began to extend himself more amd more. Very soon he was doing his portion of handling the canoes on and off the racks, and launching them.

Consideration of this subject has been brief here, but it is hoped that it will have been of suggestive value, and will have pointed out that,with a lot of common sense and ingenuity, many things may be done for the handicapped, without waiting for someone to invent gadgets or write a course of instruction. Kindness, patience, helpfulness, and sincere interest, are tools of indespensible value in working with the handicapped. Overindulgence or coddling, however, should be avoided. These persons like to be treated essentially the same as normal persons. It should be remembered that the needs, drives, urges, emotions, conflicts, frustrations,common to all humans, may in many cases be greatly intensified for the atypical, because of their relative inability to achieve satisfactions and outlets in the same manner as normal persons.

Success in the development of skill in canoeing may be considered, therefore, as of more than ordinary importance to the handicapped. In many cases this activity may be the medium through which the needed human satisfactions will come to the individual. The instructor who adapts his philosophy in accordance with the above, will not only do extraordinary service to his fellow man , but will achieve more than ordinary self satisfaction in the realization of the nature of the service he has rendered.

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